DOCUMENT RESUME

ED 149 299 CS 003 873

AUTHOR Metz, Susan Ellen Shapiro
TITLE Sex Roles in Reading Materials: Effects on Children's Reading Comprehension and Interest.
PUB DATE Jan 78
NOTE 118p.; M.Ed. Thesis, Rutgers, The State University of New Jersey

EDRS PRICE MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS Grade 5; Intermediate Grades; Masters Theses; *Reading Comprehension; *Reading Interests; *Reading Materials; *Reading Research; Sex Differences; *Sex Role; *Sex Stereotypes

ABSTRACT

Fifty-one fifth grade girls and 50 fifth grade boys participated in a study of the effects, on interest and comprehension, of stereotyped and nonstereotyped sex roles in reading materials. Reading materials consisted of eight 450-word stories about a main character who was either a pilot or a ballet dancer. Two plots were written for each occupation and versions of each plot were prepared with male and female main characters. Each child completed comprehension and interest measures for two stories. Among the findings were that the sex of the characters did not affect comprehension; boys preferred to read about masculine roles, regardless of character sex; girls preferred to read about either sex in feminine roles and about females in masculine roles; girls and boys found stories about females in masculine roles equally and highly interesting; the exclusion of stereotyped sex roles was detrimental to girls' interest in the materials; and character role was more important than character sex in influencing the reading interests of fifth graders. (AA)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED149299

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

SEX ROLES IN READING MATERIALS: EFFECTS ON CHILDREN'S READING COMPREHENSION AND INTEREST

A THESIS
SUBMITTED TO THE FACULTY
OF THE GRADUATE SCHOOL OF EDUCATION
OF
RUTGERS
THE STATE UNIVERSITY OF NEW JERSEY
BY
SUSAN ELLEN SHAPIRO METZ
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE
OF
MASTER OF EDUCATION

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Susan Ellen
Shapiro Metz
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

NEW BRUNSWICK, NEW JERSEY JANUARY, 1978

APPROVED: Marjorie R. Arnold
Marjorie Arnold
Martin Kling
Martin Kling
Josephine S Goldsmith
Josephine Goldsmith

ACTING DEAN: ______________________
Mary B. Kievit

CS003873

ACKNOWLEDGMENTS

Many people associated with Rutgers University Graduate School of Education provided valuable assistance in the preparation of this thesis. The writer expresses special appreciation to the following faculty members:

Dr. Marjorie Arnold, Department of Educational Psychology, who as chairperson provided expert advice and detailed criticism;

Dr. Martin Kling, Reading Center, and Dr. Josephine Goldsmith, Rutgers College, who as committee members provided guidance and support;

Dr. Jeffrey Smith and Ms. Virginia Dorrance, Department of Educational Statistics and Measurement, who contributed major assistance in data processing and interpretation;

Dr. James Swalm, Reading Center, who guided the original formulation of the research problem and design.

The writer also gratefully acknowledges the following people who made it possible for this study to be completed:

Dr. Howard Klein, University of Saskatchewan College of Education, who graciously gave permission for the use of the experimental materials prepared for his doctoral dissertation;

Mr. John Deignan and Mrs. Frances Dermer, Middletown Township Public School District, and their faculty members, who voluntarily permitted their students to participate in the testing for this study;

Dr. Alan Glasser, Princeton University, who provided assistance in post hoc data processing;

Mr. Gerald Metz, who willingly served as typist, proofreader, critic, confidant, babysitter, and husband.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS ii

LIST OF TABLES vii

LIST OF FIGURES vii

Chapter

I. INTRODUCTION 1

Review of the Literature 2

Influence of Schools and Books on Sex Roles 2

Evidence of Sex-Role Stereotypes in Children's Books 4

Numerical representation of the sexes 5

Occupational roles of adult characters 6

Sex-Role Stereotypes in Relation to Children . . . 8

Attitudes towards sex roles 8

Sex stereotypes in vocational attitudes . . . 10

Reading attitudes and achievement 12

Sex differences in reading interests 15

Responses of Children to Content of Reading Materials 18

Relations between interest and comprehension . 18

Effects of sex roles in materials on children 20

Statement of the Problem 24

Definition of Terms 25

Chapter Page

II. METHOD 26
    Subjects 26
    Experimental Design 27
    Materials 27
        Stories 27
        Validity and readability of stories 30
        Tests 31
    Procedure 33
        Distribution of materials 33
        Scoring 33
III. RESULTS 36
    Comprehension 37
    Interest 39
IV. DISCUSSION 45
    Comprehension 45
    Interest 48
    Limitations 54
    Educational Applications 56
    Summary of Conclusions 59
    Suggestions for Further Study 60

References 64

Appendix

A. INSTRUCTIONS 77
    Instructions to Classes 78

Appendix

Sample Test 82

Interest Scale 84

B. STORIES AND CLOZE TESTS 85

Rita Travers, Pilot 86

Roy Travers, Pilot 89

Debbie Sheldon, Pilot 92

Don Sheldon, Pilot 95

Ann Banks, Ballet Dancer 98

Arnold Banks, Ballet Dancer 101

Linda Petit, Ballet Dancer 104

Lawrence Petit, Ballet Dancer 107

LIST OF TABLES

Table Page

1. Arrangement of Stories and Subjects into Experimental Form Groups 29

2. Means and Standard Deviations for Comprehension Variable on Four Plots by Sex of Subject 38

3. Significant Differences in Mean Scores for Comprehension on Pilot and Dancer Roles by Sex of Subject 39

4. Analyses of Variance for Interest on Four Plots 40

5. Significant Differences in Mean Scores for Interest on Pilot and Dancer Roles by Sex of Subject 41

6. Means and Standard Deviations for Interest Variable on Four Plots by Sex of Subject 42

7. Mean Interest Scores by Sex of Subject and Sex of Character on Don/Debbie Sheldon plot 44

8. Mean Comprehension Scores on Four Plots for Subjects in Two Studies 47

LIST OF FIGURES

Figure Page

1. Interaction Between Sex of Subject and Sex of Character for Interest Variable on Don/Debbie Sheldon Plot . . . 43

CHAPTER I

INTRODUCTION

Because comprehension is often considered to be the major purpose of reading instruction, it is important to determine the variables that affect pupils' comprehension. Many such variables have been examined, including those related to characteristics of the pupils, of the teachers, and of the method of instruction. Some variables that have received less attention, however, are those related to the materials used for reading instruction. Aside from factors concerned with difficulty level, the principal feature of reading materials which may affect comprehension is content. Content serves as a vehicle for a variety of purposes, such as arousing interest or expressing values.

The content of reading materials may be viewed from any number of perspectives related to plot, setting, characters, or illustrations. One perspective that has become popular recently is that of sex roles. Numerous studies of sex roles in children's books have aroused widespread criticism of what is judged to be stereotyped portrayal of both male and female characters. Yet there has been hardly any empirical evidence to show whether children are affected in their interest or comprehension by the sex roles of the characters in the books they read. The present study is an attempt to provide such evidence.

Review of the Literature

This section is a review of the recent research in three main areas. First, literature concerning the influence of the schools in general and of books in particular on pupils' sex roles will be summarized. Secondly, the research providing evidence of sex-role stereotypes in children's books will be analyzed. The third section is a discussion of the effects of sex-role stereotypes on children, in terms of their attitudes, interests, and responses.

Influence of Schools and Books on Sex Roles

Since most reading materials for children are provided by and used in schools, the portrayal of sex roles in children's books is viewed here in the context of the school setting. The literature reflects wide agreement that "schools not only socialize children in a general way but also exert a powerful and limiting influence on the development of sex roles" (Saario, Jacklin, & Tittle, 1973, p. 387). Many investigators agree that reading materials are but one of many ways in which "schools function to reinforce the sexual stereotypes that children have been taught by their parents, friends, and the mass culture we live in" (Howe, 1971, p. 76). While some administrators believe that schools can and should lead the community in fostering changes in sex-role stereotypes (American Association of School Administrators, 1975), others argue that the role of the schools should be limited to the accurate reflection of changes already occurring in the community (Gaite, 1974).

Books are seen by many sources as a powerful agent for "the transmission of social values and attitudes" concerning sex roles (Frasher & Walker, 1972, p. 741). The National Education Association stated:

> Textbooks and instructional materials, designed to transmit knowledge and skills, are equally effective at indoctrinating children in societally prescribed behaviors through their selection and omission of life experiences. . . . To a great degree, these materials frame the range of experience for the young student and define reality. (1973, pp. 11-12)

Other sources agree that books reflect adult values and, more importantly, persuade children to accept them (Nilsen, 1971; Weitzman, Eifler, Hokada, & Ross, 1972). Books used in school convey the official approval of the institution and of our society (Nilsen, 1973; Pennsylvania Department of Education, 1974; Rose, 1973; Women on Words and Images, 1975). Books used in the elementary grades are particularly influential because younger children are more impressionable than older ones (Educational Products Information Exchange, 1973; Pennsylvania, 1974; Women on Words and Images, 1975).

Several researchers have focused on sex-role stereotypes in books as a negative influence on children, especially girls. Such stereotypes "can result in irreparable psychic damage and distorted aspirational levels of women" (American Federation of Teachers, 1972). They "may in fact diminish girls' opportunities for an equal education" (Moberg, n.d.), and are "detrimental to the development of both sexes, but . . . particularly damaging to girls" (EPIE, 1973). For both sexes, sex-role models in books add to the child's notion of gender identity (Hillman, 1974), influence the child's image of the other sex (Dieterich, 1972), and impose limitations on the goals and aspirations of girls and boys (Oliver, 1974).

Some writers are skeptical about the influence books may actually have, compared to the stronger effect of parents, peers, and the mass media (Gaite, 1974; Jones, 1974; Lukenbill, 1974). As with the role of schools, there are conflicting views of the role of literature as actively changing society or as merely reflecting society (Lukenbill, 1974). Nevertheless, most authors agree that existing children's books do not even accurately reflect sex roles in current society (AASA, 1975; Gaite, 1974), since they have failed to keep up with recent changes.

Evidence of Sex-Role Stereotypes in Children's Books

Recent research on children's books has produced an explosion of evidence documenting the presence of sex-role stereotypes in the overwhelming majority of materials now available. Both basal readers and trade books, the two main types of reading materials used in the schools, have been subjected to analysis and criticism. (The term 'trade books' as used in this study refers to juvenile books not primarily intended for instructional purposes. For convenience, junior high school literature anthologies are included in the category of trade books). Career education materials have also been examined.

Studies of the relative numerical representation of female and male characters have provided basic quantitative information. The qualitative aspects of sex-role stereotypes have also been considered. The area most relevant to the present study is that of the occupational roles of male and female adult characters. The sources consulted have criticized children's books as both discriminatory and unrealistic in their portrayal of working women and men.

Numerical representation of the sexes. Since approximately 51% of the population of the United States is female, it is reasonable to expect approximately equal distribution of the sexes in reading materials. Many investigators, however, have found an inadequate representation of females compared to males in basal readers. The most comprehensive of these was the analysis by Women on Words and Images (1975) of 134 readers from 15 publishers. In the 2760 stories tabulated, the ratios of male to female main characters in five types of stories were as follows: children, 5:2; adult, 3:1; biographies, 6:1; animals, 2:1; folk or fantasy stories, 4:1 (p. 6). Similar results have been reported in other studies of male vs. female characters (Frasher & Walker, 1972; National Organization For Women, 1973; Saario et al., 1973; U'Ren, 1971).

The disproportion between male and female characters has been found to increase with the grade level of the basals (Britton, 1974; Weitzman & Rizzo, 1975). The researchers also indicated that the under-representation of female characters exists regardless of the publication date of the reading series analyzed from 1930 to the present (Child, Potter, & Levine, 1946; Frasher & Walker, 1972; Graebner, 1972; Marten & Matlin, 1976; Racism and Sexism Resource Center for Educators, 1976; Schiller, 1975; Smith, 1975). Although the newest basal series published in the 1970's have shown some slight increases, the representation of females is still far from equal to that of males in any of the series analyzed (Marten & Matlin, 1976).

Inadequate representation of females in juvenile trade books has been reported in a number of sources. A predominance of male over female names was found in studies of titles of Caldecott Medal and Newberry Award winners and runners-up of the last few decades (Nilsen, 1971; Weitzman et al., 1972). The researchers commented:

> children scanning the list of titles of what have been designated as the very best children's books are bound to receive the impression that girls are not very important because no one has bothered to write books about them. (Weitzman et al., 1972, p. 1129)

Specific genres of children's literature showing a relative lack of positive female characters include picture books (Bernstein, 1974; Fraad, 1975; LaDow, 1969), science fiction (Tate, 1973), fiction for adolescents (Stavn, 1971), and fiction for elementary grades (Feminists on Children's Literature, 1971). Junior high school literature anthologies have also been criticized for their inadequate representation of females (Hurst, 1973; Lysne, 1972; Wiik, 1973). Studies comparing trade books by date reveal varied results, either slight deterioration (Fraad, 1975; Karnes, 1975; Weitzman et al., 1972) or slight improvement (Hillman, 1974) in the representation of females in recent years.

Occupational roles of adult characters. The representation of adult characters in occupational roles in basal readers has been criticized in several studies. Women on Words and Images (1975) found males shown in 147 different occupations, while females were shown in only 26 (p. 25). Frasher and Walker (1972) noted 58 different jobs for men, but 11 for women, "all of which are traditional female jobs such as teacher, nurse, librarian, stewardess" (p. 743). Comparison of basal series by grade level showed that portrayal of females in career roles decreased as grade level increased (Britton, 1974; NOW, 1970).

In a unique study, Stefflre (1969) compared the portrayal of women workers in elementary readers with the then current U.S. census data on working women. In the readers, 7% of all workers were women, but in the actual labor force, 37% of workers were women. Of all working women, 39% were shown as married in the readers, compared to 60% in reality. The readers also misrepresented the types of jobs held by women.

There has been some recent improvement in the variety of occupations for women characters in basal readers. Graebner's comparison of series published ca. 1960 and 1970 showed that while occupations for men increased 200%, occupations for women increased 400% (1972, p. 53). Similar figures were reported by Women on Words and Images (1975).

Occupational roles of adult characters in trade books for children have also been analyzed in the sources consulted. Some researchers have found that while men were portrayed pursuing a job or profession, women were shown exclusively in the role of mother/homemaker (Lukenbill, 1974; Weitzman et al., 1972). In books examined by other writers, women did hold jobs, but only in traditional service or glamour occupations (Stewig & Higgs, 1973; Thetford, 1974). Furthermore, men's jobs were more diversified and prestigious than women's jobs (Hillman, 1976; Karnes, 1975; Stewig & Higgs, 1973).

Studies comparing old and new trade books have revealed no consistent trends in the portrayal of jobs for women. The number of occupations held by women increased slightly between books of the 1930's and

1960's (Hillman, 1974, 1976) and between books published before and after 1972 (Stewig & Knipfel, 1975). A different analysis showed a moderate decrease in the variety of women's jobs in books published from 1955 to 1975, compared to those of 1922 to 1945 (Karnes, 1975). Children's books in current use accurately represent neither the types of jobs actually held by women nor the real proportion of working women who are married (Jederman, 1974).

A few researchers have analyzed sex roles in career education materials, including both print and audio-visual media. These materials have traditionally presented a division of labor by sex, in which women are limited to jobs with the lowest power, prestige, and pay (Schenck, 1976). About three times as many males as females were illustrated at work in the materials examined ("EPIE: Race, sex bias," 1976; Schmaljohn, 1974). There were five times the number of occupations for men as for women ("EPIE: Race, sex bias," 1976), and only two jobs in which the majority of workers portrayed were female (Schmaljohn, 1974).

Sex-Role Stereotypes in Relation to Children

Attitudes towards sex roles. The sex-role stereotypes reflected in the attitudes of children at or near the fifth-grade age level have been analyzed in many of the works consulted. This age group was considered especially appropriate for study because ten-year-olds are "beginning to be conscious of sex role and sex identity" (Klein, 1970, p. 61) and "are developing some awareness of social inequalities" (Stotsky, 1976).

Comparisons with other age groups have shown that the attitudes of fifth graders are less stereotyped than those of both younger and older children. Dean (1975) assessed the degree to which third- and fifth-grade girls and boys expected adults and peers to behave in terms of traditional sex-role stereotypes. The third graders were found to expect more stereotyped behaviors than did the fifth graders. Baruch (1974) found that fifth-grade girls viewed personality traits of the sexes in less stereotyped terms than did tenth grade girls. The author attributed this finding to the observation that pre-adolescent girls are relatively unconcerned about attracting boys by acting out the traditional feminine role. Since fifth-grade girls tend to perform better in school tasks than boys, on the average, they are often confident or even boastful about the superiority of their sex (Baruch, 1974).

Some researchers have attempted to change children's stereotyped attitudes through school programs with a non-sexist emphasis. Two such programs were administered to fifth graders over twelve sessions (Nash, 1974) and eight sessions (Lynch, 1975), respectively. Both authors failed to obtain significant differences between experimental and control groups on pre- and post-tests of sex-role attitudes. Similarly, Stotsky (1976) found that fifth graders showed less change in attitudes about personality and job stereotypes than either tenth-grade or kindergarten level pupils, after six weeks of using non-sexist materials to teach the regular curriculum. These results suggest that fifth graders are fairly inflexible in their attitudes towards sex roles, despite outside influences.

Some differences between boys and girls in fifth grade have been found in studies of sex-role attitudes. Even where group differences were negligible, fifth-grade girls did show some changes in attitude in response to non-sexist programs. While the attitudes of girls became slightly less stereotyped, those of boys in fifth grade did not change (Nash, 1974; Stotsky, 1976). Some sex differences were also found in projective tests of the motive to avoid success. Fifth-grade girls and boys expressed fear of success with approximately equal frequency, but only girls expressed themes of coping with problems caused by success (Baruch, 1974). These sex differences were magnified for ninth- and tenth-grade students (Baruch, 1974; Stotsky, 1976).

Thus it appears that the sex-role attitudes of fifth graders are less stereotyped than those of either younger or older children, but are not easily susceptible to change. While boys have only slightly more rigidly stereotyped attitudes than girls at this age level, these sex differences are in the same direction as those found in adolescence.

Sex stereotypes in vocational attitudes. Studies of the development of vocational attitudes in school populations have traditionally been limited to adolescence. Recently, however, attention has been focused on the need for vocational awareness education in the elementary school years. The use of reading materials to present various occupations is recommended, since students are especially interested in career fiction books in the intermediate grades (Thetford, 1973). Since the present study utilizes fiction materials concerning occupational roles, it may be helpful to review studies of occupational preferences and values in children of approximately fifth-grade age.

Sex differences in vocational values have been seen as evidence of the internalization of vocational sex stereotypes by children (Leonard, 1971). Cooker (1971) found that boys in grades four to six placed greater value on money and control as desirable job characteristics, while girls valued altruism. Studying children of the same age group, Barnett (1975) found that girls have learned to avoid high-prestige occupations. For boys, occupational prestige was related to occupational preference; for girls, prestige was related to aversion.

Several researchers have found that elementary school children tend to view occupational roles in terms of traditional sex-role stereotypes. The future career choices expressed by fifth and sixth graders followed sex-stereotyped patterns for both girls and boys (Baruch, 1974; Schlossberg & Goodman, 1972). At ages 8 and 10, boys chose a much greater variety of occupations for themselves than did girls, who largely limited their choices to teacher, nurse, or housewife (Brady & Brown, 1973). From first to eleventh grade, both sexes tended to view most occupations as appropriate for only one sex (Crow & Taebel, 1976; MacPherson, 1969; Scheresky, 1975; Valloti & Drabkoski, 1975). Sixth-grade girls and boys agreed that more men can enter traditional women's occupations than women can enter male-dominated occupations (Brooks, 1973; Schlossberg & Goodman, 1972).

Educational programs designed to change such vocational sex stereotypes have shown some success with fifth- and sixth-grade subjects. Programs aimed specifically at changing sex-stereotyped occupational perceptions were more successful than programs of general vocational awareness. Sixth-grade girls who participated in small-group career counseling sessions over a six-week period showed greater changes in attitudes towards women's work roles than classmates who did not participate. The experimental group expressed a significantly greater variety of tentative career choices than the control group, and a nonsignificantly larger decrease in the percentage of expressed choices which were sex-typed (Harris, 1974). However, a unit based on general vocational learning objectives, with only minor attention given to work roles for women, did not change fifth graders' knowledge of jobs available to women (Thompson & Parker, 1971).

Large-group programs have also been effective in changing attitudes of elementary pupils towards occupational roles for the sexes. After a class unit on "Men and Women in the World of Work," boys and girls in fifth grade increased their knowledge of and preference for non-traditional occupations for the sexes (Bucher, 1974). A similar program conducted in 91 classrooms resulted in less stereotyped attitudes for some pupils, despite the fact that participating teachers gave the program little emphasis. The positive attitude changes were greater for girls than boys in grades three to six, and greater for both sexes in grades three and four than in grades five and six (Woolever, 1976).

These results are surprisingly different from the failures reported by those who conducted other non-sexist awareness programs in the schools (discussed above). There appears to be a marked difference between nonsexist programs that concentrate specifically on occupational or vocational roles, and those that deal with a wide range of sex role traits and behaviors. Although the same age groups were involved, the specific job-related programs were effective in changing attitudes, but the more general programs were not. The success of these vocational programs might possibly be due to students' personal interest in future jobs, or to the particular methods and participants involved. At any rate, it does appear that some sex stereotypes of fifth-grade children may not be as resistant to change as previously indicated.

Reading attitudes and achievement. It is widely known that girls generally read better than boys in the elementary school years, and various causes for this sex difference have been investigated. The National Assessment of Educational Progress (1975) indicated that girls' reading achievement surpasses that of boys at ages 9, 13, and 17, but the sexes are equal by young adulthood. In studies reviewed by Thompson (1975), however, age 10 was seen as a turning point for boys. From ages 6 to 9, boys show lower reading scores and greater reading disability; but from ages 10 to 15, most investigators reported no significant sex differences in these areas.

A cross-cultural investigation by Johnson (1973-4) revealed that this sex difference favoring girls is by no means universal among English-speaking school systems, which suggests that its causes are cultural rather than biological. American girls achieved higher reading scores than boys in all three grades examined--two, four, and six. Canadian girls surpassed boys in grades two and four, but boys surpassed girls at grade six. In England, boys' reading achievement was higher than that of girls in grades four and six; in Nigeria, boys had a slight lead over girls in grades two, four, and six. The validity of Johnson's conclusions has been challenged by Klein (1977), however, who cited a number of sources of conflicting results, and noted that many of the sex differences reported by Johnson were slight or nonsignificant. Possible factors contributing to reading achievement differences in different countries were discussed by both authors, including parental and societal views of education for boys and girls, and classroom environment including teacher sex (Johnson, 1976; Klein, 1977). It is interesting to note here that reviewers have found sex-role stereotypes in children's books published in both England (Nightingale, 1972) and

Canada (Sherrill, 1972) to be comparable to those found in America.

Sex-role stereotypes in society and in books have been cited in the sources consulted as a possible cause of sex differences in reading achievement in our culture. The fact that girls have more positive attitudes towards reading than boys (Askov & Fishbach, 1973; Harrington, 1972; Tregaskis, 1972) and the societal view of reading as a feminine activity (Dwyer, 1973; Gentile, 1975) are both factors seen as contributing to the superior reading achievement of girls. The dependent behaviors expected of children in the typical classroom may conflict with the agressive model society views as masculine, thus creating conflict and anxiety in boys (Gentile, 1975; Zimet, 1976). Since boys in children's books are shown almost exclusively in vigorous physical activity rather than quiet play such as reading, "little reinforcement is given to the idea that reading and other language-related activities are also appropriate and fun for boys" (Frasher & Walker, 1972, p. 747).

Sex factors in the relations between reading achievement and attitudes have been investigated as another possible cause of boys' and girls' unequal achievement. Fifth-grade boys and girls with more positive attitudes towards reading showed greater reading achievement than those with negative attitudes (Harrington, 1972). In third grade, boys who viewed reading as masculine achieved higher comprehension than boys who saw reading as neutral or feminine (Schickedanz, 1973). Sex-typed labeling of a neutral task as masculine rather than feminine or neutral resulted in higher achievement for sixth-grade boys (Stein, Pohly, & Mueller, 1971). Dwyer (1974) found that children's perception of reading as sex-appropriate or sex-inappropriate was a better predictor of reading achievement in grades two through twelve than the children's sex, sex-role preference, or liking or disliking of reading. From these studies it may be concluded that the stereotype of reading as not appropriate for the masculine role is likely to cause or contribute to the reading problems experienced by many boys.

Studies of the relations between reading achievement and sex-role preference have yielded inconsistent results. Sears (1970) found low correlations for twelve-year-olds between femininity and achievement for girls, and between lack of femininity and achievement for boys. Dwyer (1974) found sex-role preference to be a relatively poor predictor of reading achievement for girls and boys in grades two through twelve. In contrast, Topping (1975) found that reading achievement was negatively related to sex-role preference for girls, but unrelated for boys in grades two through six. Similarly, Stein et al. (1971) found that achievement on a neutral task was related to masculine preference for sixth-grade girls, but not related to the sex-role preference of boys. The latter studies suggest that girls who accept the feminine role may be inhibited from displaying achievement, while girls who are high achievers may be inhibited from feeling feminine.

Sex differences in reading interests. Sex differences in children's reading interests have been examined in the sources consulted, and their possible causes discussed. Purves and Beach (1972) noted in their review of literature that "most studies find that sex is the most important determinant of differences in reading interests" (p. 93). Chiu (1973) examined specific interests of fourth graders in various genres of reading material. Significant sex differences showed that boys preferred biography, science, social studies, and sports, while girls preferred adventure, fantasy, humor, and poetry. A survey of reading habits of nine-year-olds showed that boys read fewer books than average, but are atypically high in nonfiction reading habits. Girls read more books than average, and are especially high in the number of poetry and fiction books read (NAEP, 1975).

In most earlier research, little attention was given to examining possible causes of such sex differences. The assumption that boys and girls were innately interested in different subjects was a commonly accepted myth (Tibbetts, 1974). Recently, however, researchers have recognized that sex differences in reading interests are learned. In reading as well as in other areas, children tend to identify with characters of their own sex (Purves & Beach, 1972) and to follow cultural expectations by selecting materials that are considered sex-appropriate (Klein, 1968). Since prevailing stereotypes in society dictate different interests for males and females, these are reflected in the interests of children.

One aspect of sex differences in reading interests has received particular attention in recent studies. Most earlier research showed "general agreement that boys will read stories with male main characters, but spurn stories with female main characters. On the other hand, it is said that girls are willing to read about males" (Klein, 1968, p. 34). More recently, however, investigators have maintained that this finding is a function of interest rather than sex per se. Since "boys won't read books about dull children--male or female" (Nilsen, 1971, p. 926), they reject the traditionally stereotyped girl character because she is uninteresting, not because she is female (Graebner, 1972; Scott, Foresman, & Co., 1972; Tibbetts, 1974). If books about girls were exciting and interesting, this trend might change (Bernstein, 1974; Women on Words and Images, 1975). This view was confirmed by Klein (1968), who found that stories about a female airplane pilot were highly and equally interesting to fifth graders of both sexes. Similarly, Frasher (1977) found that both boys and girls in third grade greatly preferred an active, independent girl character over a stereotyped girl or boy character in the same story.

Some causes have been suggested for the fact that girls accept materials with characters of either sex. Zimet (1976) proposed the view that girls are more willing than boys to disregard low-interest content in reading texts. Since girls are known to be more deferential to authority figures than boys, they may be more prone to accept whatever the teacher offers, whereas boys are more apt to express defiance by rejecting schoolbooks that do not appeal to them (Zimet, 1976). Tibbetts (1974) suggested that girls read boys' stories "out of a desire to identify with 'superior' individuals," since both sexes are aware of "the relatively higher value society places on males" (p. 280).

The research in various areas reviewed above provides a psychological background for interpreting the results of the present study. Children's attitudes concerning general and vocational sex roles may be hidden predisposing factors which contribute to their observable responses to materials. Reading attitudes and interests are related to reading achievement in subtle ways which have only recently been brought to light. Sex differences in many of these characteristics illustrate the diverse effects of sex-role socialization on boys and girls. Intervention programs devoted to counteracting sex-role stereotypes have raised the hope that fifth graders may not be too old to change.

Responses of Children to Content of Reading Materials

Although the research demonstrating the presence of sex-role stereotypes in children's reading materials is both extensive and intensive, it does not prove that these stereotypes have any measurable effect on children. Despite the implicit or explicit assumption in the sources reviewed that stereotyped materials would have negative effects, only empirical studies of children reading such materials can provide adequate evidence. Unfortunately, there has been relatively little empirical research dealing with the effects of content of reading materials on children.

In most studies, reading skills per se have traditionally been considered the most important variable. Grambs (1972) criticized this traditional attitude:

> The emphasis on the skill of reading has obscured the content of reading. . . . The implication is that content is not present when children are learning to read, and therefore values are not transmitted by reading such elementary materials. This is an unfortunate and naive view, shared by many educators and by most of the public. (p. 1)

Undeniably, content is present when children are learning to read; but it is the relation between content and skills that is of primary concern to educators. Once the relation between sex-role content and reading comprehension is clarified, the social and psychological merits of stereotyped and nonstereotyped materials can be more clearly evaluated. Those investigators who have examined this relation have found inconsistencies and disagreements in their results, thus suggesting the need for the present study.

Relations between interest and comprehension. While interest and comprehension have been studied separately in most sources, a few researchers have examined the relations between interest and comprehension. There has been some support for the hypothesis that children achieve highest comprehension when reading those materials in which they have expressed the greatest interest (Estes & Vaughan, 1973). However, when sex differences and sex-role stereotypes are taken into account, this simple relationship becomes more complex.

Examination of sex differences in effects of content on children revealed disagreement between sources. Klein (1968) examined the interest and comprehension of fifth-grade boys and girls in response to stories about a pilot and a ballet dancer. Children of both sexes expressed stereotyped interests--that is, girls preferred ballet dancer stories and boys preferred pilot stories. However, the influence of interest on comprehension was not consistent for the sexes. Girls achieved higher comprehension when reading about their preferred occupation. Boys showed no comprehension differences between occupations, even though their preference for the pilot content was quite strong. Klein concluded that the effects of interest upon comprehension were significantly positive for girls, but negligible for boys.

In contrast, Asher and Markell (1974) found that the comprehension of fifth-grade boys was significantly affected by interest, while that of fifth-grade girls was not. Each child selected topics of greatest and least interest from a slide presentation. Written passages about these topics were then individually matched to the choices of each subject, and presented in a cloze test format. Boys' scores on high-interest passages were significantly higher than their scores on low-interest passages. The scores of girls did not vary according to interest level. These results support Zimet's view that girls are more willing or able than boys to disregard content and maintain high comprehension regardless of interest (1976).

Furthermore, sex differences in comprehension levels in this study were also related to interest levels. Girls achieved higher comprehension than boys on low-interest passages, but there were no significant sex differences on high-interest passages (Asher & Markell, 1974). These results lead to the idea that the inferiority of boys in reading may possibly be modified or eliminated by appropriate selection of content.

Further investigation by Asher (1975) focused on identifying causes of the obtained sex differences. When the interest ratings of two groups of fifth-graders were analyzed in terms of sex-role stereotypes, boys' interests were far more highly sex-typed than girls' interests. Specifically, boys' interests showed strong positive correlations with masculine sex-typing (.74 and .78), and moderate negative correlations with feminine sex-typing (-.54 and -.66). Girls' interests showed only low to moderate positive correlations with feminine sex-typing (.34 and .42), and nonsignificant negative correlations with masculine sex-typing (-.09 and -.24). The author observed that "the findings of these studies were congruent with the hypothesis that high-interest material makes reading a more sex-appropriate activity for boys" (p. 17).

It appears that the relations between comprehension and interest may be mediated by sex-role factors in the reading materials. Direct investigation of the effects of these factors may shed some light on the reasons for the conflicting results obtained by different authors.

Effects of sex roles in materials on children. Only a few researchers have investigated the effects of sex roles in stories on children, and most of these dealt with preschool-age subjects. Kummerow (1974) read traditional and non-traditional picture books aloud to children aged 4 to 6. The non-traditional stories concerned single-parent families, including a mother going to work as a photographer, and a father doing housework. No significant differences were found in the subjects' ability to tell what each character did in the stories. When asked about specific occupations unrelated to the stories, both boys and girls assigned male names to the job of pilot and female names to that of dancer.

Jennings (1975) also read stories aloud to preschool children, comparing girl and boy characters in both ballet dancer and mail carrier roles. After watching dramatizations of the stories with flannel-board figures, the children were asked to retell each story using the same figures, and to indicate which story they liked best. While the children tended to prefer the traditional sex roles, they showed better recall for stories with reversed sex roles. This result was attributed to the effects of novelty (p. 220).

Picture books about boys in non-traditional roles were read aloud to kindergarten children by Styer (1975). When questioned about the behavior of the characters, approximately 70% of the children said that boys should not be given dolls to play with, but only 45% felt that boys should not sleep with teddy bears. About 60% of the boys and 50% of the girls felt that boys should not want dolls, and about 75% of boys and 65% of girls believed boys should not be afraid of ghost stories. Thus slightly more girls than boys accepted displays of emotion by boys in stories.

The only empirical study of the effects of sex roles in stories on children old enough to read to themselves was conducted by Klein (1968). Interest and comprehension of fifth-grade boys and girls were measured for stories about a pilot and a ballet dancer, with a male and a female version for each occupation. Klein examined the effects of character sex and character occupation separately, but did not give much attention to the possibility of interaction between character sex and character occupation. When he did combine these factors, only the traditional roles of the male pilot and female dancer were selected, and these only in relation to different levels of reading comprehension.

Thus Klein did not directly address the question of the effects of stereotyped vs. nonstereotyped sex roles. Instead he apparently began from the premise that the roles of male pilot and female ballet dancer were appropriately sex-typed, while those of female pilot and male ballet dancer were sex-inappropriate. The results of his study, however, were that children do not strictly follow these assumptions in their reading interest or comprehension patterns.

Specifically, the findings for interest were that girls preferred to read about a female character regardless of occupation. Boys preferred to read about a male when the occupation was that of a pilot, but showed equally low interest in both male and female ballet dancer stories. The only sex role which was equally appealing to both girls and boys was the female pilot, although sex differences in interest were highly significant for all other stories (pp. 111-112). Klein concluded that stories portraying female characters in occupations traditionally associated with males may be the best material for use with mixed-sex groups (p. 116).

These results have important implications from the point of view of sex-role stereotypes, but still leave questions unanswered. The high interest of boys in female pilot stories contradicts the assumption that boys do not like to read about females. Girls' preference for female characters in all occupations challenges the validity of the widespread underrepresentation of female characters in children's books (Klein, 1970, p. 64). It is evident that both sexes enjoyed the nonstereotyped role of the female pilot, but Klein did not examine children's interest in its nonstereotyped counterpart, the male ballet dancer role. Additional work based on the same material is needed to obtain that information.

In comprehension, which was measured by cloze tests, the sex of the main character had no effect on reading comprehension of either boys or girls. However, the character's occupation did affect the comprehension of girls, who performed significantly better in ballet dancer content than in pilot content (Klein, 1968, p. 103). Analysis by cloze score level showed that this was attributable to the low- and average-scoring girls, while the high-scoring group was not affected by character role (pp. 105-106). Since girls showed quite a large comprehension increase for the female dancer role as compared to the male pilot role, it seems possible that their comprehension might also be affected by the contrast between the female pilot and male dancer stories, which were not examined by Klein. A re-examination of the problem in terms of stereotyped and non-stereotyped sex roles would enable this possibility to be explored.

The effects on comprehension of boys were more elusive. While the total group showed only chance differences in comprehension between ballet dancer and pilot occupations, this was apparently caused by opposite effects for high- and low-scoring boys, which cancelled each other out (p. 103). Further analysis showed that low-scoring boys achieved better comprehension for the male pilot than the female dancer stories. Surprisingly, however, high-scoring boys achieved better comprehension for the female dancer than the male pilot stories (pp. 105-106). This leads one to wonder how boys would respond to the male dancer and female pilot roles, which were not analyzed by Klein. The traditional assumption that such nonstereotyped materials would damage boys' comprehension might not necessarily be supported. Further study in terms of sex-role stereotypes appears to be indicated.

Statement of the Problem

The present study was an investigation of the overall question: How are the reading comprehension and interest of fifth-grade girls and boys affected by stereotyped and nonstereotyped sex roles in reading materials?

This question was broken down into the following subordinate questions:

1. Is the reading comprehension or interest of fifth-grade girls or boys affected by reading about male vs. female characters within a masculine role?

2. Is the reading comprehension or interest of fifth-grade girls or boys affected by reading about male vs. female characters within a feminine role?

3. Is the reading comprehension or interest of fifth-grade girls or boys affected by reading about masculine vs. feminine roles, regardless of the sex of the character?

Definition of Terms

The major terms in this study were defined as follows:

Role was defined as the occupation of a character in a story. Sex role was defined as the combination of sex and occupation of a character in a story. The sex roles used in this study were: male pilot, female pilot, male ballet dancer, and female ballet dancer.

Feminine role was defined as an occupation in which a substantial majority of persons so employed are female. Masculine role was defined as an occupation in which a substantial majority of persons so employed are male. In this study, the feminine role selected was ballet dancer, and the masculine role was pilot.

Stereotyped sex roles were defined as male characters in masculine roles and female characters in feminine roles. The stereotyped sex roles used in this study were male pilot and female ballet dancer.

Nonstereotyped sex roles were defined as female characters in masculine roles and male characters in feminine roles. The nonstereotyped sex roles used in this study were female pilot and male ballet dancer.

Comprehension was defined as the number of words correctly replaced in cloze tests of the material read. Interest was defined as the degree of expressed liking for a given type of story.

CHAPTER II

METHOD

Subjects

The subjects in this study were 51 girls and 50 boys in the fifth grade in two elementary schools in the Middletown Township Public School District in New Jersey. Four classes from one school (its entire fifth grade) and two classes from the other school participated. All were self-contained, heterogeneously grouped classes of approximately the same size (20 to 25 pupils per class, including those absent at the time of the study).

The two schools serve very similar neighborhoods which are contiguous, and which are located within a large township with a population just over 50,000. The school neighborhoods are suburban in nature, and include a wide variety of socioeconomic levels. Each neighborhood has a population of 6,000 to 8,000, almost entirely white, and the great majority of families have children under 18. The median income of each neighborhood in 1970 was slightly over $13,000, and only 3-4% of families have incomes below the poverty level. The occupations of the residents include substantial numbers of professional, management, and clerical workers, and foremen, as well as moderate numbers of sales, service, farm, transport and other operative workers, and laborers (U.S. Bureau of the Census, 1970). The socioeconomic characteristics of these two neighborhoods are very similar to the corresponding characteristics of the township as a whole (N.J. Dept. of

Community Affairs, 1970).

Experimental Design

The experimental design used in this study involved two independent variables, sex of subject and sex of character, and two dependent variables, interest and comprehension. These variables were analyzed within each of the four plots used in the experimental reading materials--two plots for the feminine role (dancer), and two plots for the masculine role (pilot). The main effects of subject sex and character sex, and their interaction, were analyzed for interest and comprehension separately, within each plot.

Materials

The materials used for this study were prepared by Howard A. Klein, Ph.D. for his doctoral dissertation (Syracuse University, 1968), and used with his permission. The length, subject matter, and interest level of the materials were established as appropriate for this age group by Klein's work. The present study is not a replication, but a re-examination of the materials from a different perspective.

Stories. The materials consisted of eight stories, each approximately 450 words in length, about a main character engaged in an occupation. The occupations used were either pilot or ballet dancer. Two plots were written for each occupation in order to provide alternate forms for the experimental design. For each plot, the main character was given a male or female first name, and all gender-related words were changed accordingly. All other aspects of the stories were identical for both sexes. The title of each story consisted of the main character's name and occupation. The method of changing the sex of the characters is illustrated below:

Linda Petit, Ballet Dancer

> When Linda was seventeen, she surprised her family by announcing that she was going to become a doctor. Meanwhile she landed a summer job as a chorus girl in a Paris night club.

Lawrence Petit, Ballet Dancer

> When Lawrence was seventeen, he surprised his family by announcing that he was going to become a doctor. Meanwhile he landed a summer job as a chorus boy in a Paris night club.

The stories were given the following titles:

Ann Banks, Ballet Dancer
Arnold Banks, Ballet Dancer
Linda Petit, Ballet Dancer
Lawrence Petit, Ballet Dancer
Debbie Sheldon, Pilot
Don Sheldon, Pilot
Rita Travers, Pilot
Roy Travers, Pilot

Each last name--Banks, Petit, Sheldon, and Travers--was associated with a different plot concerning the specific occupation. The first names were varied only to change the sex of the main character; otherwise, the stories with the same last name were identical.

The eight stories were arranged in forms consisting of two stories about the same occupation. The two stories in each form differed in the sex of the main character, and in the character's last name and associated plot. This arrangement enabled each child to read two stories, presenting a male and a female character in the same occupation, without reading the same plot twice. Thus each child read two stories about a particular occupation, one story with a stereotyped sex role and one with a nonstereotyped sex role.

The subjects were divided into eight equal groups, corresponding to the eight forms presented in Table 1. Each group included subjects from all of the classrooms tested, with six boys and six girls in each group. Subjects were assigned to groups by chance, according to the seating arrangements of the various classrooms. No two pupils seated together were in the same group. For every group receiving a given form, another group received the same two stories in reverse order. This was done in order to counterbalance the possible effects of the order in which the stories were read. The arrangement of stories and subjects into experimental groups is summarized in Table 1.

TABLE 1

ARRANGEMENT OF STORIES AND SUBJECTS INTO EXPERIMENTAL FORM GROUPS

Form group[a]	Occupation of character	Sex role read first	Stories in form
1	Pilot	Stereotyped	Don Sheldon Rita Travers
2	Pilot	Stereotyped	Roy Travers Debbie Sheldon
3	Pilot	Nonstereotyped	Rita Travers Don Sheldon
4	Pilot	Nonstereotyped	Debbie Sheldon Roy Travers
5	Dancer	Stereotyped	Ann Banks Lawrence Petit
6	Dancer	Stereotyped	Linda Petit Arnold Banks
7	Dancer	Nonstereotyped	Lawrence Petit Ann Banks
8	Dancer	Nonstereotyped	Arnold Banks Linda Petit

[a] Each form was assigned to a group of six boys and six girls.

Validity and readability of stories. The occupations of pilot and ballet dancer were originally selected by Klein (1968) on the basis of census information for the U.S. and Canada. Examination of the U.S. census for 1970 by the present researcher confirmed that these occupations are engaged in by a large majority of persons of one sex. Specifically, persons employed as airplane pilots were approximately 51,000 males to 700 females; those employed as dancers were approximately 5,000 females to 1,000 males (ballet or other type of dance was not specified) (United States Bureau of the Census, 1970, p. 719).

In addition, field research by Klein (1968) indicated that these occupations were likely to have different appeal for boys and girls. Subjects in the pilot study were asked to rank stories about five occupations in order of preference. Boys ranked pilot stories highest and ballet stories lowest. Girls ranked ballet dancer stories second highest and pilot stories lowest. The occupations of pilot and ballet dancer were selected as the most discriminating between the sexes (Klein, 1968).

Each story was written so as to appear to be the beginning of a longer story. With one exception (Don/Debbie Sheldon), each story begins by portraying a young person interested in an occupation, who then grows up and performs that occupation successfully. In writing the stories, Klein sought to "maintain the integrity of the role of the person doing a certain type of work" by avoiding "incidents which would stretch credibility if superimposed on the opposite sex character" (p. 60).

The readability levels of the stories were equated by two methods. The stories were evaluated for readability by Klein (1968) using the

Dale-Chall formula (Dale & Chall, 1948), which measures sentence length and difficulty of vocabulary compared to a basic list. Based on three 100-word samples taken from each story, the average readability scores of the four basic stories ranged from 5.2 to 5.6 (Klein, 1968, p. 62). These scores are equivalent to the fifth to sixth grade range of reading level.

The stories were then evaluated by the present researcher using the Fry formula (Fry, 1968), which measures sentence length and word length. Based on three 100-word samples taken from each story, three of the stories had average readability levels at the borderline between sixth and seventh grade. The fourth story (Roy/Rita Travers) was within the sixth-grade range; this story also received the lowest Dale-Chall rating (5.2).

Thus the Fry formula yielded higher grade levels than the Dale-Chall formula. This contrasts with Fry's observation that the Dale-Chall formula tended to produce higher grade level scores. Fry also found a very high rank-order correlation between the two formulae (.94) (1968). In any case, both methods supported the approximate equivalence of all four basic stories--Banks, Petit, Sheldon, and Travers. Although the Travers story received the lowest scores using both formulae, this was found to have no significant effects on the comprehension scores of the subjects in Klein's study (1968).

Tests. Comprehension of the experimental stories was measured by means of cloze tests prepared by Klein (1968). The reliability and validity of the cloze precedure have been established by Bormuth (1967) and Rankin and Culhane (1969). The length and format of the tests used in the present study conform to Bormuth's procedures for fifth-grade subjects.

Cloze tests containing 50 deletions were prepared for each story. Each cloze test retained an introduction of approximately 40 words from the original story. "This was done to focus the reader's attention on the sex of the main character and the occupation that person followed" (Klein, 1968, p. 67). Beginning with the second word of the first sentence following the introduction, every seventh word was deleted and replaced with a standard underlining 15 spaces long. Following the fiftieth deletion, one or two concluding sentences from the original story were omitted from each cloze test because of space limitations. In counting words, a word was defined by the white space separating it from other words. For example, a hyphenated word such as "take-off" was counted as one word.

Interest in the experimental stories was measured by a six-point scale developed by Klein (1968). The six statements presented in the scale ranged from "This is the type of story I like to read very, very much" to "This is the type of story I do not like to read very, very much." The subjects were asked to check one statement immediately after reading each story.

The stories and tests were arranged in booklets of two pages printed on both sides. The front page contained pupil identification, brief instructions, and the interest scale. The back page contained the story. The two inside pages contained the cloze test for that story, printed upside down in order to discourage pupils from looking back at the story while taking the test. Answers to the cloze test were written directly in the blank spaces provided.

Procedure

Distribution of materials. In each classroom, a sample passage and cloze test were distributed by the researcher, who then read instructions aloud from a prepared page to insure uniform procedures in all classrooms. The pupils were encouraged to try to fill in all the blanks, but were cautioned not to refer to the stories while working on the cloze tests.

Each pupil then received two booklets making up one of the eight forms. The booklets in each form were marked "1" and "2" so that pupils would use them in the correct order required for counterbalancing.

Pairs of booklets were sorted prior to distribution into two equal stacks--one for distribution to boys, the other for distribution to girls. Each stack contained an equal number of each of the eight forms, arranged in consecutive order within the stack so that all the forms were tested by both sexes in each classroom. The sex to which materials were distributed first was alternated between classes.

After writing their name, sex, and teacher's name on the front page of both booklets, the pupils were instructed to read the story on the back page of the first booklet, then fill in the interest scale on the front page. The next step was to open the booklet, turn it upside-down, and take the cloze test. This sequence was repeated for the second booklet by each pupil. Each booklet took approximately 20 to 30 minutes to complete, but no time limit was imposed. As the pupils worked, the researcher walked around the room to ascertain that all pupils were following the instructions correctly.

Scoring. In order to create eight equal groups it was necessary to eliminate some of the original population of 101 subjects. After incomplete booklets were removed, any complete booklets in excess of 12 per group were randomly eliminated. The final sample thus consisted of 96 subjects, 48 of each sex, who completed 192 booklets. Each story was read by 12 boys and 12 girls, so that there were 24 booklets per story. All were scored by the researcher.

The interest scales were scored separately from the cloze tests. The six statements were given values from "1" (strong dislike) to "6" (strong liking), and one value was scored for each booklet read. In cases where a pupil failed to complete the interest scale or placed two or more check marks on the scale, that booklet was discarded from the final sample.

The cloze tests were scored blind by opening the booklets so that the page with the pupil's name, sex, teacher, and interest scale was upside down and facing away from the researcher. Only the exact words found in the original story were accepted as correct answers; synonyms and alternate grammatical forms were scored as wrong answers. Misspellings were accepted as long as the word was recognizable. When two words were written for one blank, credit was given if one was the correct word; this differed from Klein's scoring procedure (1968).

The above scoring procedures follow those recommended by Bormuth (1967). McKenna (1976) recently verified that such verbatim scoring is as valid as scoring methods which accept synonyms as correct answers. The rank-order correlation between the two methods was quite high (.952), and both methods also correlated highly with standardized comprehension test scores. The verbatim scoring method was selected for the present study because of its simplicity in use.

The score for each cloze test was the number of correct answers. Due to an unnoticed error, the tenth blank in the test for the Banks story was printed with the correct answer already given. To compensate for this error, the tenth blank in all other tests was not scored. Thus the maximum score for each story was 49 instead of the original 50.

CHAPTER III

RESULTS

The investigation of the effects of stereotyped and nonstereotyped sex roles in this study was based on three questions:

1. Is the reading comprehension or interest of fifth-grade girls or boys affected by reading about male vs. female characters within a masculine role?

2. Is the reading comprehension or interest of fifth-grade girls or boys affected by reading about male vs. female characters within a feminine role?

3. Is the reading comprehension or interest of fifth-grade girls or boys affected by reading about masculine vs. feminine roles, regardless of the sex of the character?

The first and second questions are concerned with the effects of stereotyped vs. nonstereotyped sex roles within either masculine or feminine roles. The third question does not deal with stereotypes directly, but rather allows for comparison between the two types of role referred to in the preceding questions.

These questions concerned both comprehension and interest, each of which was analyzed separately. Within each of the four plots used in the experimental materials, two two-way analyses of variance were performed, one for interest and one for comprehension. Each analysis of variance was based on the main effects of character sex and subject sex, and their interaction. Thus there were eight analyses of variance in all, which provided data for answering the first two experimental questions.

The third question, however, could not be answered by means of the analyses of variance. Since each analysis was performed within either a masculine or feminine role, comparisons between these roles could not be made. To make such comparisons possible, post hoc t-tests were performed for both interest and comprehension scores on pilot and dancer roles.

Comprehension

The first two experimental questions for comprehension were answered by means of analysis of variance. All analyses for comprehension failed to achieve significance at the level of $p < .05$. Thus neither boys nor girls were influenced in their reading comprehension by the sex of the characters within either type of role.

The relative comprehension levels of the sexes for the four plots are illustrated in Table 2. The mean cloze scores for boys and girls are approximately equal on each plot. Thus both sexes performed at basically the same level of comprehension. The standard deviations for girls are consistently higher than those for boys, but none of the differences were significant (using the F max test between variances). Thus girls showed only slightly greater variability in comprehension than did boys. Boys showed significantly greater variability in comprehension for the masculine role than they did for the feminine role. The differences in variances for boys between the Travers and Petit plots, and between the Sheldon and Petit plots, were significant at the .05 level for the F max test. Differences between the Banks plot and either of the pilot plots were not significant.

In order to determine the significance of comprehension differences

TABLE 2

MEANS AND STANDARD DEVIATIONS FOR COMPREHENSION VARIABLE ON FOUR PLOTS BY SEX OF SUBJECT

	Pilot					
	Roy/Rita Travers			Don/Debbie Sheldon		
Sex of subject	Mean	(SD)	N[a]	Mean	(SD)	N
Girls	21.29	(9.39)	24	23.83	(8.50)	24
Boys	21.29	(8.35)	24	25.21	(7.99)	24
	Dancer					
	Ann/Arnold Banks			Linda/Lawrence Petit		
Girls	26.83	(9.07)	24	26.83	(7.19)	24
Boys	27.00	(6.55)	24	26.33	(5.43)	24

[a]N = number of scores.

between masculine and feminine roles, two-tailed t-tests were performed for both sexes together and each sex separately. All differences were in the same direction and significant at the level of .05 or better, as shown in Table 3. Both sexes achieved higher comprehension on the feminine role (dancer) than on the masculine role (pilot). This answer to the third question for comprehension, however, cannot be clearly interpreted because of lack of equivalence in difficulty level among the experimental stories. When the four plots are compared with each other, it may be observed in Table 2 that the mean comprehension scores on the Roy/Rita Travers plot are lower than those on the other three plots.

TABLE 3

SIGNIFICANT DIFFERENCES IN MEAN SCORES FOR COMPREHENSION ON PILOT AND DANCER ROLES BY SEX OF SUBJECT

Sex of subject	N[a]	Occupation of character	Mean	t value	Level of significance
Boys	48	Dancer	26.67	2.312	.05
	48	Pilot	23.25		
Girls	48	Dancer	26.73	2.451	.02
	48	Pilot	22.56		
Both	96	Dancer	26.70	3.381	.01
	96	Pilot	22.91		

[a] N = number of scores.

This suggests that the Travers plot was more difficult for the subjects to comprehend than the rest. This difference contradicts the readability analysis reported in Chapter II, which indicated that the Travers plot was somewhat less difficult than the others.

Interest

The results for interest were also analyzed by means of two procedures, analysis of variance and t-tests. The analyses of variance for interest for the four plots are summarized in Table 4. These results provide negative answers to the first two experimental questions, and establish between-sex comparisons for the third question. There was a significant main effect for sex of subject on interest for all four plots, but there was no main effect for sex of character on interest for any of the plots. Thus girls and boys showed different interest patterns depending upon the type of

TABLE 4

ANALYSES OF VARIANCE FOR INTEREST ON FOUR PLOTS

Source	df	MS	F
Roy/Rita Travers, Pilot			
Sex of subject	1	15.1875	10.62**
Sex of character	1	0.1875	0.13
Sex of subject x sex of character	1	0.0208	0.01
Don/Debbie Sheldon, Pilot			
Sex of subject	1	10.0833	5.07*
Sex of character	1	1.3333	0.67
Sex of subject x sex of character	1	10.0833	5.07*
Ann/Arnold Banks, Ballet Dancer			
Sex of subject	1	28.5208	15.23****
Sex of character	1	0.0208	0.01
Sex of subject x sex of character	1	0.5208	0.23
Linda/Lawrence Petit, Ballet Dancer			
Sex of subject	1	24.0833	10.01***
Sex of character	1	3.0000	1.25
Sex of subject x sex of character	1	4.0833	1.70

*p=.03

**p=.002

***p=.003

****p=.0003

role portrayed, but not on the sex of the character. Girls liked stories about dancers more than boys did, regardless of the sex of the dancer character, and boys liked stories about pilots more than girls did, regardless of the sex of the pilot character. Thus the factor that affected interest was occupation, not sex-role stereotypes.

Examination of differences in interest between masculine and feminine roles was conducted by means of two-tailed t-tests, as shown in Table 5. When the mean interest scores of both sexes together were compared, the subjects as a group preferred the pilot role to the dancer role. However, when each sex was examined separately, sex differences in interest patterns were found. Boys expressed higher interest in the pilot role than the dancer role, but girls expressed higher interest in the dancer role than the pilot role. Apparently, boys' preferences were considerably stronger than girls', so that total group differences favoring pilot masked girls' preference for the feminine role. The

TABLE 5

SIGNIFICANT DIFFERENCES IN MEAN SCORES FOR INTEREST ON PILOT AND DANCER ROLES BY SEX OF SUBJECT

Sex of subject	N[a]	Occupation of character	Mean	t value	Level of significance
Boys	48	Dancer	2.71	5.744	.001
	48	Pilot	4.54		
Girls	48	Dancer	4.25	2.959	.01
	48	Pilot	3.52		
Both	96	Dancer	3.48	2.489	.02
	96	Pilot	4.03		

[a] N = number of scores.

results of the t-tests confirm the results of the analyses of variance, indicating that girls prefer the feminine role and boys prefer the masculine role, for both between-sex and within-sex comparisons.

The relative levels of preference of the sexes for the four plots may be seen in Table 6, which displays the mean interest scores and standard deviations of boys and girls on each plot. Boys expressed approximately the same levels of interest in the pilot role as girls did in the dancer role. However, boys' interest in the dancer role was rather low, compared to girls' relatively high interest in the pilot role. The standard deviations of the scores of boys and girls were comparable for the pilot stories, but those of boys were

TABLE 6

MEANS AND STANDARD DEVIATIONS FOR INTEREST VARIABLE ON FOUR PLOTS BY SEX OF SUBJECT

	Pilot					
	Roy/Rita Travers			Don/Debbie Sheldon		
Sex of subject	Mean	(SD)	N[a]	Mean	(SD)	N
Girls	3.75	(1.22)	24	3.29	(1.40)	24
Boys	4.88	(1.12)	24	4.21	(1.53)	24
	Dancer					
	Ann/Arnold Banks			Linda/Lawrence Petit		
Girls	4.04	(1.04)	24	4.46	(1.10)	24
Boys	2.50	(1.59)	24	2.92	(1.89)	24

[a] N = number of scores.

significantly larger than those of girls for the dancer stories.

Sex differences in the variances on both the Petit and Banks plots were significant at the .05 level using the F max test. The difference in variances for boys between the Petit and Travers plots was also significant at the .05 level. Thus boys showed greater variability of interest for the feminine role, both in comparison to girls and in comparison to boys' own interest in the masculine role.

Further results relevant to the first experimental question were found in the interaction effect obtained on one of the analyses of variance for interest. The first question about interest concerned the effects on girls and boys of reading about male vs. female characters within a masculine role. There was a significant interaction of sex of subject with sex of character for the interest variable on one of the pilot stories, Don/Debbie Sheldon, as shown in Figure 1.

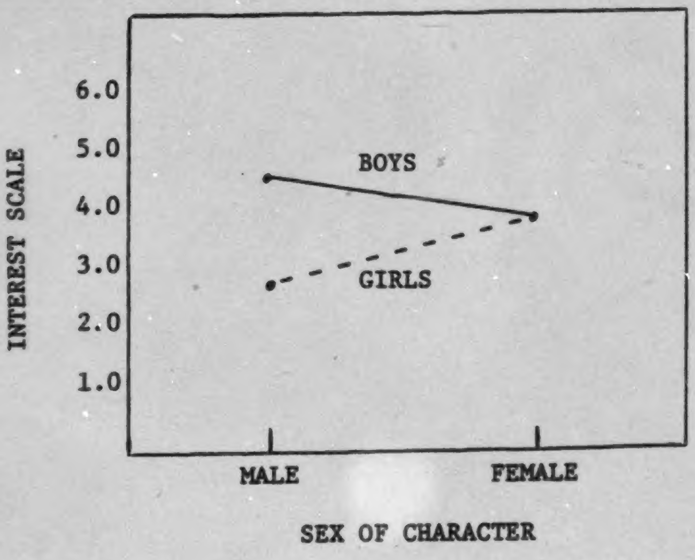

Figure 1. Interaction between sex of subject and sex of character for interest variable on Don/Debbie Sheldon plot.

Boys and girls found the female pilot story equally interesting. Boys liked the female pilot story somewhat less than they liked the male pilot story. Girls, however, greatly preferred the female pilot story over the male pilot story. Thus the effect of sex of character within the pilot role influenced the interest of girls much more strongly than it did that of boys. The mean interest scores of boys and girls on the Don/Debbie Sheldon plot are displayed in Table 7.

TABLE 7

MEAN INTEREST SCORES BY SEX OF SUBJECT AND SEX OF CHARACTER ON DON/DEBBIE SHELDON PLOT

	Sex of character			
Sex of subject	Male	N[a]	Female	N
Boys	4.50	48	3.92	48
Girls	2.67	48	3.92	48

[a]N = number of scores.

The second question for the interest variable dealt with the effects of reading about male vs. female characters within a feminine role. There was no interaction between sex of subject and sex of character for either of the dancer plots. When reading about ballet dancers, neither girls nor boys preferred characters of one sex to those of the opposite sex.

CHAPTER IV

DISCUSSION

The overall purpose of this study was to examine the effects of stereotyped and nonstereotyped sex roles in reading materials on the interest and comprehension of fifth-grade boys and girls. In this chapter, conclusions and implications based on the results will be discussed in terms of this purpose. Comparisons with previous research will be made, and applications of this study to educational practice and possible future research will be suggested. Limitations of the study will also be discussed.

Comprehension

The overall comprehension levels of boys and girls were approximately equal. This indicates that there is no sex difference among the subjects in general reading ability, as measured by cloze tests. Boys and girls did differ in variability of comprehension. The variability of girls' comprehension scores was consistent across roles, but boys showed a greater spread of comprehension scores on the masculine role than on the feminine role. This contrasts with the finding that boys showed greater variability of interest for the feminine role than for the masculine role. Although the reason for boys' comprehension variability on the masculine role is not known, it is apparently not due to any variability in their interest.

The results for comprehension clearly indicate that character sex has no effect on comprehension for either boys or girls. This conclusion is evident from the lack of any effects on comprehension in the analyses of variance. The same conclusion was reported by Klein (1968). The effects of character role on comprehension, however, are difficult to evaluate. Although both sexes achieved higher comprehension on the dancer role stories, this finding is not entirely valid. It is not clear whether the comprehension differences between dancer and pilot roles are a result of character role alone. Difficulty factors in the stories used may have confounded the results, since one of the four plots was more difficult than the others. Although Klein used the same materials, this weakness seems to have affected his results only slightly. The results obtained may be due to character role, story difficulty, or the interaction of the two, but on the basis of this study it cannot be ascertained which is the significant factor.

Comparison of mean comprehension scores on the four plots indicates that the Travers story was the main source of the confounding effect of difficulty. As shown in Table 8, mean comprehension scores for both sexes together were lower on this plot than on the other plots in both Klein's study and the present one. In this study, however, scores on the Travers story were unusually low, and the Sheldon plot also showed lower cloze scores than the dancer plots. This lack of equivalence among all four plots makes it unsound to draw any conclusions about the effects of character role on comprehension. Furthermore, since stereotyped and nonstereotyped sex roles were defined as the combination of character sex and character role, the present results do not permit conclusions to be drawn about the effects of sex-role stereotypes on comprehension.

TABLE 8

MEAN COMPREHENSION SCORES ON FOUR PLOTS FOR SUBJECTS IN TWO STUDIES

	Pilot				Dancer			
Author	Roy/Rita Travers	N[a]	Don/Debbie Sheldon	N	Ann/Arnold Banks	N	Linda/Lawrence Petit	N
Klein[b]	24.35	78	25.76	78	25.98	78	27.01	78
Metz	21.29	48	24.52	48	26.92	48	26.48	48

[a] N = number of subjects in row 1; N = number of scores in row 2.

[b] The data in row 1 are from Klein (1968), p. 79.

The present results tend to refute certain assumptions about sex differences in reading. Other researchers have suggested that the inferior reading achievement of boys may be due in part to their strong dislike of certain types of content. This study demonstrates that even if this view is correct, the sex of the characters in reading materials is not among the contributing factors. There is no basis in this study or in Klein's for the opinion that the presence of female characters in children's books may prevent boys from achieving higher comprehension, nor is there any justification for the view that the increased use of male characters in books might influence boys' comprehension for better or for worse.

On the basis of the present study, it may also be stated that the sex of the characters in children's books makes no contribution to the superior reading comprehension of girls. Changing the sex of characters in previously stereotyped roles can be expected to leave girls' reading achievement exactly as it was. The present results partially confirm Zimet's view (1976) that girls are able to ignore the content of stories in favor of maintaining comprehension. This study also indicates, however, that boys may be just as capable of disregarding content, at least in regard to character sex.

Interest

The results reported for the interest variable are especially interesting when interpreted in terms of sex-role stereotypes. While girls prefer the feminine role and boys prefer the masculine role, neither sex has a preference for male or female characters within these roles. In other words, the nonstereotyped male dancer is just as interesting to girls as the stereotyped female dancer, and the nonstereotyped female pilot is just as interesting to boys as the stereotyped male pilot. For fifth graders, it is not the presence or reversal of sex-role stereotypes that determines interest in reading materials. It is the type of role portrayed that has primary influence. Once the preferred role has been selected, both stereotyped and nonstereotyped characters are equally well liked. This conclusion must be tempered by the observation that different results were obtained in an earlier and larger study; but the present results can be considered applicable to children in a contemporary American educational and social setting.

The present results differ from those found by Klein (1968), although he also found that girls preferred the feminine role and boys preferred the masculine role. Within these preferred roles, however, both sexes expressed greater interest in the stereotyped characters in Klein's study. Boys preferred the male pilot to the female pilot, and girls preferred the female to the male characters in both pilot and dancer roles. Thus Klein's subjects expressed more stereotyped interests than those in the present study.

When possible causes for these differing results are examined, cultural differences between the two studies seem to be more important than methodological differences. The present researcher did not alter Klein's materials, but simply omitted some additional stories and tests which Klein used but found to be of questionable value. (These were stories about a male and female social worker, and semantic differential scales for all stories.) As a result, the total testing time for each student was considerably reduced in the present study, and the instructions and classroom procedures were simplified. Different statistical methods and a smaller population were also used. As discussed above, the Travers plot seems to have been more difficult for the present subjects than Klein's, but this difference does not seem adequate to account for the disparity in results for interest between the two studies.

There were other differences between the two studies which might have contributed to the differing results. Klein's study was conducted in Saskatchewan, Canada, and the present study was conducted in New Jersey, U.S. Although Canadian and American culture and education are usually assumed to be very similar, sex differences in reading achievement are not necessarily the same in both countries. American girls consistently achieve higher reading comprehension than boys throughout the elementary school grades (Johnson, 1976), but Canadian boys tend to score nearly as high as girls (Klein, 1977). At grade six and above, boys sometimes achieve higher comprehension than girls in Canada (Johnson, 1976; Klein, 1977). If these differences in reading achievement of boys and girls reflect substantial differences in reading education practices between the two countries, there may be unknown educational factors responsible for the differences obtained between the two populations. If attitudes toward reading and sex roles are differently conveyed to American and Canadian children, it is possible that certain affective factors may have caused subjects in the two countries to respond differently.

It is also notable that there is a time lapse of a decade between Klein's study and the present one. In the intervening years there has been a great increase in awareness and acceptance of the women's movement by the general public. There have also been some changes in philosophy and methods of teaching reading, and some nonsexist reading materials have become available for use in schools. It is possible that certain effects of these general changes may have filtered down to fifth-grade children in such a way as to make their reading interests less sensitive to sex-role factors in the materials they read.

The interest patterns of girls and boys within the roles they do not prefer are more complicated. Boys express a strong dislike for the feminine role, but find male and female ballet dancers equally uninteresting; the boys in Klein's population reacted similarly to those in the present study. Once boys have rejected a story because of the type of role portrayed, the use of stereotyped or nonstereotyped characters does nothing to increase their enjoyment. Girls, on the other hand, definitely prefer a character of their own sex when reading about a masculine role, as shown in the interaction reported. Although they are not strongly interested in reading about pilots in general, the presence of a nonstereotyped female pilot in one story is enough to increase their interest almost to the level expressed for the dancer stories. Thus girls do not share boys' blanket rejection of material traditionally reserved for the opposite sex. Their interests seem to be more flexible th[illegible]hose of boys in response to certain nonstereotyped roles.

A particularly important result in the obtained interaction is the finding that both sexes judged the female pilot story to be equally interesting. The same finding was reported by Klein (1968). Apparently girls respond positively to the fact that the character is female rather than male, and boys respond positively to the fact that the character is a pilot rather than a dancer. The female character in a masculine role thus provides an ideal combination of the variables of character sex and character role. By selecting those factors which have been shown to maximize the interest of each sex separately, a nonstereotyped sex role may be presented which has positive appeal for both sexes together.

The results observed in the obtained interaction are relevant to some controversies in the literature on sex differences in reading interests. The responses of the subjects in the present study lend support to those researchers who have criticized the long-standing myth that boys reject stories with female characters, but girls accept stories with male characters. Supporters of that myth seem to have confounded the variables of character sex and character role. As long as materials with stereotyped sex roles were the only kind available, separating the effects of those variables was neither possible nor necessary. When female characters are always portrayed in feminine roles, boys have no choice but to reject them. When masculine roles are always filled by male characters, girls may accept them, but with reduced interest at best.

A more precise way of stating the nature of sex differences in reading interests is that boys reject stories about feminine roles, regardless of the sex of the character. Girls may accept or reject stories about masculine roles, but are much more interested in female than male characters within those roles. Apparently the subjects in this study have learned which occupational roles are considered masculine and feminine in their culture, and have developed their reading interests accordingly. They tend to dislike those roles traditionally associated with the opposite sex, and to prefer those roles usually assigned to their own sex. The sex of the character is only an influential factor for girls reading about a masculine role. Otherwise, it is character role rather than character sex that is primarily responsible for sex differences in reading interests.

These conclusions regarding sex differences in interest are of course based on mean interest scores for boys and girls. Sex differences in variability of interest are also worth noting. While girls showed nearly equal variability of interest scores for both types of role, the interest variability of boys was greatest for the feminine role. This suggests that boys are not unanimous in their rejection of ballet dancer stories. Some boys are at least willing to accept stories about a traditionally feminine role, and a few individuals definitely enjoy them. It is also true that some boys have very strong negative reactions against such materials, but other boys dislike them only mildly. The general conclusion that boys dislike reading about feminine roles should therefore be applied cautiously when dealing with individual boys.

The lack of any main effects of character sex on interest is a valuable result. If this factor had been significant, it would have meant that fifth graders as a group preferred one sex to another within a given occupation. Instead, it is evident that character sex is only important in relation to the child's own sex, particularly for girls. It is not clear, however, why the interaction between sex of character and sex of subject was obtained on only one pilot plot (Sheldon) but not on the other (Travers). Similarly, in Klein's study, girls' preference for the female pilot was strong for the Sheldon plot and slight for the Travers plot.

There are some subtle differences between the two plots which may have affected children's responses. The Roy/Rita Travers story is slightly more difficult than the Sheldon story, as discussed in Chapter III. However, since there were no significant effects for comprehension within either plot, this difference does not seem important. The Travers character is introduced as a child with two ambitions, photography and flying. He/she then grows up to become a pilot who photographs jets in flight for the airplane industry. Perhaps these realistic touches enabled children to identify with the character more readily, even when the sex did not match their own. The story ends with the pilot's bailing out just as the plane catches fire and then explodes. It is possible that this event was exciting enough to maintain an equal level of interest in a character of either sex.

The Don/Debbie Sheldon character is a rather idealized figure in an exotic setting--"Alaska's most famous bush pilot." This is also the only plot which did not mention the character's childhood. This character may have seemed somewhat remote to the subjects, so that character sex was the only familiar feature with which the child could identify. There is some discussion in the story of the possibility of a plane crash, but nothing dangerous actually happens to the pilot. This plot may therefore have been less exciting to the children.

The Sheldon plot was apparently less interesting to both sexes; the mean interest scores reported in Table 4 are somewhat lower on the Sheldon plot than on the Travers plot. Interest in the sex of the Sheldon character may have been heightened because interest in the rest of the material was reduced. Since the pilot role was highly interesting to boys in the first place, the added interest provided by a male character was not that great. For girls, however, this was the less interesting of the two plots within the less preferred role. When interest is low enough, perhaps girls need the extra motivation provided by a character of their own sex.

Limitations

Certain limitations of this study may be noted. Despite the fact that the four plots used were equated on the basis of readability formulae, they were not completely equivalent in terms of the subjects' responses. The Travers story was exceptional in that it was judged less difficult than the other stories in readability level, but more difficult than the others in cloze scores actually achieved by the subjects. This inconsistency suggests that readability formulae cannot be expected to be accurate in all cases. It is not known, however, what particular features of the Travers plot distinguished it from the other plots.

The four plots were also not completely equivalent in interest level; it is especially difficult to control for this factor in advance. For both boys and girls, as shown in Table 4, Sheldon was the less interesting pilot story, and Banks was the less interesting dancer story. This difference for the Sheldon story may have affected the results, as previously discussed. It is possible that different conclusions might have been indicated if the study had been conducted using different stories about the same occupations.

The interest scale used in this study was found to be useful and appropriate by Klein (1968) and the present researcher, but its objective reliability and validity have not been determined. The scale thus represents a first approximation, for which further validation is required.

Generalization of the results of this study should be limited to populations with similar socioeconomic characteristics, i.e. white suburban lower to upper middle-class communities. It may also be noted that in the school neighborhoods, relatively few mothers of school-age children held jobs outside the home in 1970 (about one-third of all mothers of children ages 6 to 17, with the husband present in the household). Results might possibly differ in areas where few mothers were full-time housewives.

The design of this study did not permit comparisons to be made between masculine and feminine roles within the analyses of variance. Because each child read two stories about the same role, each analysis of variance had to be performed within the same role. This procedure made it necessary to use post hoc t-tests in order to answer the experimental questions completely. The need for these post hoc tests in addition to the original design is an acknowledged weakness of this study.

The purpose of assigning two stories about the same role tc each subject was to provide both stereotyped and nonstereotyped stories for each subject while keeping classroom testing time to a minimum. Alternative ways of assigning stories were considered but were found to sacrifice either validity or feasibility. Given the practical constraints encountered on the number of subjects available and the length of time allowed in each classroom, the present design was selected as the best available compromise.

Educational Applications

Applications to educational practice can be made from the results of this study with respect to both interest and comprehension. Some educators may have been concerned that the increased use of female characters in children's books might reduce comprehension. The lack of effects of character sex on comprehension indicates that there is no need for such concern. It cannot be determined from this study whether masculine and feminine character roles actually affect reading comprehension. However, it is clear that merely altering the sex of the character in any given role does not alter the comprehension of either boys or girls. Thus the value of using characters in roles traditionally considered sex-inappropriate can be debated on the social, psychological, and motivational merits of the issue, once the basic question of cognitive effects is eliminated.

The results for the interest variable demonstrate that the thoughtful use of nonstereotyped sex roles in children's books can provide enjoyable new options for fifth graders of both sexes. When presented with a female character in a masculine role, girls and boys have the opportunity to share the same reading materials with enthusiasm. They can select stories of genuine interest from among a greater variety of choices than is available with only stereotyped materials.

The present results also suggest a need for caution in the use of nonstereotyped materials, particularly with boys. While female characters in masculine roles are likely to be well received by both sexes, male characters in feminine roles can be expected to reduce boys' interest. Apparently boys in fifth grade do not enjoy seeing characters of their own sex in a role that is not traditionally masculine; nonstereotyped sex roles are only acceptable for female characters. However, girls are likely to enjoy all nonstereotyped materials, whether males in feminine roles or females in masculine roles are portrayed. This sex difference is in accord with research indicating that fifth-grade boys have somewhat more rigidly stereotyped views of sex roles than do girls.

The preference of girls for female characters to male characters in a masculine role provides a strong case against the continued stereotyped portrayal of female characters in children's books. The literature has demonstrated that in most reading materials, girls and women are inadequately represented in all but the most traditional feminine roles. Girls are thus denied the opportunity to express their true preferences, and are obliged to settle for stories about males in masculine roles which do not interest them very highly. The results of this study support Klein's conclusion that "inordinate use of predominantly male content violates the best interests of girls and is therefore educationally unsound" (1970, p.64).

The argument that the omission of female characters from children's books is necessary for the motivation of boys cannot be supported. The results of this study and of Klein's provide evidence that boys enjoy reading about females almost as much as males in masculine roles. For stories about feminine roles, boys are likely to reject the material regardless of the sex of the characters; excluding female characters from such materials would not serve to motivate boys to read them. However, since girls enjoy both male and female characters in feminine roles, there is good reason to include them in children's books. Perhaps the best way of satisfying the interests of both boys and girls is to provide materials with characters of both sexes in both types of role, and let the children make their own selections, with adult guidance available when needed.

Since there were significant results for interest in this study but not for comprehension, it is tempting to conclude that interest alone is not very important in teaching reading. The key point to note here is that in the experimental situation, the subjects were required to read the materials they received. In the classroom, one would hope that pupils have a certain degree of freedom of choice in selecting reading materials, and that pupil interests are considered when teachers select materials for them. Interest in sex-role factors may or may not affect a child's comprehension, but it may certainly affect his or her willingness to read particular materials. If content is regarded as a vehicle for learning and practicing reading skills, that vehicle must be accepted and used by the learner. If content is regarded as a vehicle for conveying social and moral values, that vehicle must itself be valued by the child.

Interest in reading materials is important for another reason. Because children often make generalizations on the basis of their immediate experience, their interest in particular materials is likely to affect their attitude towards reading. If a child is repeatedly presented with reading materials of low interest, she or he may conclude that reading itself is not an interesting activity. Conversely, reading materials that are highly interesting to a child may foster a positive attitude towards reading in general.

It is not suggested, however, that children should be shielded from all encounters with low-interest materials, because such experiences may be valuable in the long run. Guided exposure to books about feminine roles may eventually broaden some boys' stereotyped views, and may satisfy the interests of individual boys with atypical preferences. Books about males in masculine roles may be interesting to some girls, and may provide opportunities to learn about activities usually closed to girls.

If teachers know when to expect an initial negative reaction, they may be able to provide supplementary motivation before low-interest materials are used. Variety rather than restriction of options in reading materials should be encouraged. The addition of books with nonstereotyped sex roles to a school or library shelf should not necessitate the removal of all books with stereotyped sex roles.

Summary of Conclusions

1. The sex of the characters in reading materials does not affect the comprehension of fifth-grade girls or boys.

2. The effects on comprehension of feminine vs. masculine roles and of stereotyped vs. nonstereotyped sex roles are undetermined.

3. Sex roles in reading materials affect the interests of fifth-grade boys and girls in different ways.

4. Fifth-grade boys prefer to read about masculine roles, regardless of character sex.

5. Fifth-grade girls prefer to read about either sex in feminine roles, and about females in masculine roles.

6. Fifth-grade girls and boys find stories about females in masculine roles equally and highly interesting.

7. Character role is more important than character sex in influencing the interests of fifth graders in reading materials.

8. The exclusion of nonstereotyped sex roles from children's reading materials is detrimental to girls' interest in the materials.

9. The inclusion of nonstereotyped sex roles in children's reading materials is not detrimental to boys' interest in the materials.

10. The responses of fifth graders to sex roles in reading materials may vary in different cultural settings.

Suggestions for Further Study

The main weakness of the present study was the lack of equivalence of difficulty level in the experimental materials, despite attempts to control for this factor by means of readability formulae. Further research utilizing materials in a similar manner should be based on more precise methods of equating difficulty level. One such method would be to use the cloze tests themselves as a readability measure, by administering the tests (without the complete passages) to a population similar to the experimental subjects selected. Any discrepancies in difficulty level could then be corrected by rewriting the materials and repeating the field test. Once the absence of differences in difficulty levels of the tests was established, the complete passages and tests could then be used with the target group.

A similar procedure could be used to control for interest differences between alternate plots within each occupation. The stories and interest scales (without cloze tests) could be administered to a second field-test population in such a way as to yield comparisons between plots, but not between character roles or sexes. Continued revision and retesting might be required to equate interest levels on all plots used.

Future researchers should also attempt to avoid the design weakness of the present study by incorporating both character role and character sex into the original design. One way to accomplish this would be to assign four stories to each subject: one male pilot, one female pilot, one male dancer, and one female dancer. However, such a design would require at least four times as many subjects and twice as much testing time per classroom as in the present study. Thus further study using the same or similar stories would have to be conducted on a much larger scale.

An alternative method of studying the same variables would be to use fewer stories with more characters in each. A single story portraying four characters, two of each sex, in both stereotyped and nonstereotyped activities or roles, is a possible solution to the practical problems noted above. The subjects would then be asked to indicate their attitudes towards various characters. This procedure was followed by Frasher (1977).

As noted in Chapter I, very few empirical studies of the effects of sex roles in reading materials have been conducted at all. The inconsistencies in results between the present study and Klein's are an indication that more work in this area is needed. It would be valuable to continue studying different populations in order to determine the reasons for different responses. It is difficult at present to evaluate the conclusions of any one investigator, because there is not yet enough evidence to form a consensus in the field.

There are a number of issues related to sex roles in reading materials which were not directly examined in the present study. Once the immediate questions relating to comprehension and interest have been answered, attention may be directed in future research to the more elusive factors of sex-role concepts and attitudes, particularly on a longitudinal basis. It would be valuable to determine, for example, whether stereotyped and nonstereotyped sex roles in reading materials are related to children's general or vocational sex-role concepts and attitudes. Previous researchers have described a paradoxical situation, in that general sex-role attitudes of fifth graders tend to be relatively nonstereotyped but inflexible, while vocational sex-role attitudes are more stereotyped but also more responsive to change. It remains to be found whether sex roles in children's books can change such attitudes, or whether sex-role attitudes themselves determine children's perceptions of sex roles in materials.

When attempts are made to change children's attitudes towards sex roles by manipulating materials, it would be wise to begin from the known interests of each sex. As the present study has demonstrated, it is possible to combine a high-interest factor for one sex, such as masculine roles for boys, with a high-interest factor for the other sex, such as female characters for girls. The resulting combination is a nonstereotyped role that is both interesting and unfamiliar to girls and boys alike. Further research is needed to determine whether materials portraying females in traditionally masculine roles affect children's attitudes towards sex roles in relation to reading, self, and society.

References

American Association of School Administrators. Sex equality in educational materials. AASA Executive Handbook series, 4(1), 1975. (ERIC Document Reproduction Service No. ED 111 096)

American Federation of Teachers. Sexism and teaching materials. Policy Resolution, 1972. In M. Stern, (Ed.). Women in education: Changing sexist practices in the classroom. Washington, D.C.: Author, n.d.

Asher, S. R. Effect of interest in material on sex differences in reading comprehension. University of Illinois, 1975. (ERIC Document Reproduction Service No. ED 109 610)

Asher, S. R., & Markell, R. A. Sex differences in comprehension of high- and low-interest reading material. Journal of Educational Psychology, 1974, 66, 680-687.

Askov, E. N., & Fishbach, T. J. An investigation of primary pupils' attitudes toward reading. Journal of Experimental Education, 1973, 41, 1-7.

Barnett, R. C. Sex differences and age trends in occupational preference and occupational prestige. Journal of Counseling Psychology, 1975, 22, 35-38.

Baruch, G. K. Sex-role attitudes of fifth-grade girls. In J. Stacey, S. Bereaud, & J. Daniels, (Eds.). And Jill came tumbling after: Sexism in American education. New York: Dell, 1974.

Bernstein, J. The changing roles of females in books for young children. Reading Teacher, 1974, 27, 545-549.

Bormuth, J. R. Comparable cloze and multiple-choice comprehension test scores. Journal of Reading, 1967, 10, 291-299.

Brady, R. P., & Brown, D. B. Women's Lib and the elementary school counselor. _Elementary School Guidance and Counseling_, 1973, _7_, 305-308.

Britton, G. E. Why Jane can't win: Sex stereotyping and career role assignments in reading materials. Paper presented at annual meeting of International Reading Association (19th, New Orleans, May 1-4, 1974). (ERIC Document Reproduction Service No. ED 092 919)

Britton, G. E. Primers for prejudice. _The Reading Letter_, 1975, _1_(4), 5-7.

Brooks, L. P. The sex-role stereotyping of occupational perceptions by sixth grade students. (Doctoral dissertation, Wayne State University, 1973). _Dissertation Abstracts International_, 1973 _34_(7), 3862A. (University Microfilms No. 73-31,698)

Bucher, C. H. The impact of a non-stereotyped sex-role occupational unit on elementary school children's occupational knowledge, vocational aspirations, and expressed occupational attitudes. (Doctoral dissertation, University of Virginia, 1974). _Dissertation Abstracts International_, 1974, _35_(5), 2672A. (University Microfilms No. 74-23,316)

Child, I. L., Potter, E. H., & Levine, E. M. Children's textbooks and personality development. _Psychological Monographs_, 1946, _60_(3), 1-54.

Chiu, L. H. Reading preferences of fourth grade children related to sex and reading ability. _Journal of Educational Research_, 1973, _66_, 369-373.

Cooker, P. G. Vocational values of elementary school children as they relate to sex and grade level in school. (Doctoral dissertation, The Florida State University, 1971). Dissertation Abstracts International, 1972, 32(11), 6121. (University Microfilms No. 72-13,496)

Crow, M. L., & Taebel, K. Sex-role stereotyping is alive and well in sixth graders. Elementary School Journal, 1976, 76, 358-364.

Dale, E., & Chall, J. S. A formula for predicting readability. Educational Research Bulletin, 1948, 27, 37-54.

Dean, B. L. The assessment of third and fifth-grade children's perceptions of sex-role stereotypes. (Doctoral dissertation, University of Georgia, 1975). Dissertation Abstracts International, 1976, 36(9), 5939A. (University Microfilms No. 76-6394)

Dieterich, D. J. ERIC/RCS report: "Books that lie and lullabye." Elementary English, 1972, 49, 1000-1009.

Dwyer, C. A. Sex differences in reading: An evaluation and a critique of current theories. Review of Educational Research, 1973, 43, 455-467.

Dwyer, C. A. Influence of children's sex role standards on reading and arithmetic achievement. Journal of Educational Psychology, 1974, 66, 811-816.

Educational Products Information Exchange. Sex stereotyping in instructional materials. EPIE Educational Product Report, 1973, 7(57). (ERIC Document Reproduction Service No. ED 090 550)

EPIE: Race, sex bias pervades career education materials. Phi Delta Kappan, 1976, 57, 427-428.

Estes, T. H., & Vaughan, J. L., Jr. Reading interests and comprehension: Implications. Reading Teacher, 1973, 27, 149-153.

Feminists on Children's Literature. A feminist look at children's books. School Library Journal, 1971, 96(2), 19-24.

Fraad, H. Sex-role stereotyping and male-female character distribution in popular, prestigious, and sex-role defining children's literature from 1959 to 1972. (Doctoral dissertation, Columbia University Teacher's College, 1975). Dissertation Abstracts International, 1976, 36(8), 5295A. (University Microfilms No. 76-3251)

Frasher, R. S. Boys, girls, and Pippi Longstocking. Reading Teacher, 1977, 30, 860-863.

Frasher, R. S., & Walker, A. Sex roles in early reading textbooks. Reading Teacher, 1972, 25, 741-749.

Fry, E. A readability formula that saves time. Journal of Reading, 1968, 11, 513-516.

Gaite, A. J. H. Sex stereotyping: Identifying and changing the role and influence of schools. Paper presented at Annual Meeting of American Educational Research Association, April, 1974. (ERIC Document Reproduction Service No. ED 092 828)

Gentile, L. M. Effect of tutor sex on learning to read. Reading Teacher, 1975, 28, 726-730.

Graebner, D. B. A decade of sexism in readers. Reading Teacher, 1972, 26, 52-58.

Grambs, J. D. Sex-stereotypes in instructional materials, literature, and language: A survey of research. Women's Studies Abstracts, 1972, 1(4), 1-4; 91-94.

Harrington, A. J. The interrelationships among reading achievement, attitude toward school, and attitude toward reading for third and fifth grade pupils. (Doctoral dissertation, State University of New York at Buffalo, 1972). Dissertation Abstracts International, 1973, 34(4), 1701A. (University Microfilms No. 73-15,467)

Harris, S. R. Sex typing in girls' career choices: A challenge to counselors. Vocational Guidance Quarterly, 1974, 23, 128-133.

Hillman, J. S. An analysis of male and female roles in two periods of children's literature. Journal of Educational Research, 1974, 68, 84-88.

Hillman, J. S. Occupational roles in children's literature. Elementary School Journal, 1976, 77, 1-4.

Howe, F. Sexual stereotypes start early. Saturday Review, October 16, 1971, pp. 76-82; 92-94.

Hurst, G. Sex bias in junior high school literature anthologies. St. Louis, Mo.: National Organization for Women, 1973. (ERIC Document Reproduction Service No. ED 085 763)

Jederman, J. D. The sexual stereotype of women in children's literature. (Doctoral dissertation, Northern Illinois University, 1974). Dissertation Abstracts International, 1974, 34(11), 6944A. (University Microfilms No. 74-11,378)

Jennings, S. A. Effects of sex typing in children's stories on preference and recall. Child Development, 1975, 46, 220-223.

Johnson, D. D. Sex differences in reading across cultures. Reading Research Quarterly, 1973-74, 9(1), 67-86.

Johnson, D. D. Cross-cultural perspective on sex differences in reading. Reading Teacher, 1976, 29, 747-752.

Jones, B. C. A. A new cache of liberated children's literature--in some old standbys! Wilson Library Bulletin, 1974, 49, 52-56.

Karnes, E. L. An analysis of male and female roles in two periods of award winning adolescent literature. (Doctoral dissertation, University of Nebraska--Lincoln, 1975). Dissertation Abstracts International, 1976, 36(8), 5299A. (University Microfilms No. 76-4524)

Klein, H. A. Interest and comprehension in sex-typed materials. (Doctoral dissertation, Syracuse University, 1968). Dissertation Abstracts International, 1969, 29(11A), 3875. (University Microfilms No. 69-8632)

Klein, H. A. Interest and comprehension in sex-typed materials. In J. H. Catterson (Ed.). Children and literature. Newark, Del.: International Reading Association, 1970.

Klein, H. A. Cross-cultural studies: What do they tell about sex differences in reading? Reading Teacher, 1977, 30, 880-886.

Kummerow, K. L. The relationship of age and sex of four-, five-, and six-year-olds to the perceptions of sex roles as portrayed in children's literature. Master's thesis, Florida State University, 1974. (ERIC Document Reproduction Service No. ED 097 124)

LaDow, S. A content-analysis of selected picture books examining the portrayal of sex-roles and representation of males and females. South Bend, Indiana: Indiana University, 1976. (ERIC Document Reproduction Service No. ED 123 165)

Leonard, G. E. Career guidance in the elementary school. Elementary School Guidance and Counseling, 1971, 6, 124-126.

Lukenbill, W. B. Fathers in adolescent novels: Some implications for sex-role reinterpretations. School Library Journal, 1974, 99, 26-30.

Lynch, G. P. Strategies for the mitigation of sex-role bias in fifth-grade urban youth. (Doctoral dissertation, Pennsylvania State University, 1975). Dissertation Abstracts International, 1976, 37(2), 888A. (University Microfilms No. 76-17,188)

Lysne, R. 'A woman's place': What's cooking in junior high school English anthologies. Minnesota English Journal, 1972, 8(2), 27-40. (ERIC Document Reproduction Service No. ED 088 026)

MacPherson, L. I. The effects of social class on females' perceptions of traditional sex-role adherence in occupations. (Doctoral dissertation, Arizona State University, 1971). Dissertation Abstracts International, 1971, 31(9), 4467A. (University Microfilms No. 71-5981)

Marten, L. A., & Matlin, M. W. Does sexism in elementary readers still exist? Reading Teacher, 1976, 29(8), 764-767.

McKenna, M. Synonymic versus verbatim scoring of the cloze procedure. Journal of Reading, 1976, 20, 141-143.

Moberg, V. A child's right to equal reading. Washington, D.C.: National Education Association, n.d. (ERIC Document Reproduction Service No. ED 089 231)

Nash, A. S. Changing attitudes towards sex-role differentiation: The effects of a sex-role awareness course on sex-role stereotyping and sex-role anxiety. (Doctoral dissertation, Boston University

School of Education, 1974). Dissertation Abstracts International, 1974, 35(3), 1450A. (University Microfilms No. 74-20,455)

National Assessment of Educational Progress. Male-female achievement in eight learning areas: A compilation of selected assessment results. New York: National Center for Education Statistics, 1975. (ERIC Document Reproduction Service No. ED 117 133)

National Education Association. Education for survival. Sex Role Stereotypes Project. Washington, D.C.: Author, 1973. (ERIC Document Reproduction Service No. ED 094 299)

National Organization for Women. Sex role stereotyping in elementary school readers. In Report on sex bias in the public schools. New York: Author, 1973.

New Jersey Department of Community Affairs. U.S. Census Data for New Jersey Townships. Trenton, N.J.: Author, 1970.

Nightingale, C. Sex roles in children's literature. Assistant Librarian, 1972, 65, 154-158.

Nilsen, A. P. Women in children's literature. College English, 1971, 32, 918-926.

Nilsen, A. P. Books à la mode: A reader's digest. Elementary English, 1973, 50, 1029-1033.

Oliver, L. E. Women in aprons: The female stereotype in children's readers. Elementary School Journal, 1974, 74, 253-259.

Pennsylvania Department of Education. Self-study guide to sexism in schools. Bureau of General and Academic Education. Harrisburg, Pa.: Author, 1974.

Purves, A. C., & Beach, R. Literature and the reader: Research in response to literature, reading interests, and the teaching *of literature*. Urbana, Ill.: National Council of Teachers of English, 1972.

Racism and Sexism Resource Center for Educators. Sexism and racism in popular basal readers 1964-1976. New York: Author, 1976. (ERIC Document Reproduction Service No. ED 123 307)

Rankin, E. F., & Culhane, J. W. Comparable cloze and multiple-choice comprehension test scores. *Journal of Reading*, 1969, *13*, 193-198.

Rose, K. Sleeping Beauty awakes: Children's literature and sex role myths. Paper presented at annual meeting of National Council of Teachers of English (63rd, Philadelphia, Nov. 22-24, 1973). (ERIC Document Reproduction Service No. ED 089 322)

Saario, T. N., Jacklin, C. N., & Tittle, C. K. Sex role stereotyping in the public schools. *Harvard Educational Review*, 1973, *43*(3), 386-416.

Schenck, J. P. Sexism in textbooks: A guide to detection. *American Vocational Journal*, 1976, *51*, 42-45.

Scheresky, R. F. Six, eight, and ten year old children's views of occupational roles. (Doctoral dissertation, Michigan State University, 1975). *Dissertation Abstracts International*, 1976, *36*(9), 5810A. (University Microfilms No. 76-5634)

Schickedanz, J. A. The relationship of sex-typing of reading to reading achievement and reading choice behavior in elementary school boys. (Doctoral dissertation, University of Illinois at Urbana-Champaign, 1973). *Dissertation Abstracts International*, 1974, *34*(12), 7645A. (University Microfilms No. 74-12,176)

Schiller, S. L. The depiction of sex roles in children's readers. (Doctoral dissertation, University of Pittsburgh, 1975).

Dissertation Abstracts International, 1975, *36*(4), 1925A. (University Microfilms No. 75-22,463)

Schlossberg, N. K., & Goodman, J. A woman's place: Children's sex stereotyping of occupations. *Vocational Guidance Quarterly*, 1972, *20*, 266-270.

Schmaljohn, P. J. Sex role stereotyping in a select group of materials for elementary school career education. (Doctoral dissertation, University of Northern Colorado, 1974). *Dissertation Abstracts International*, 1975, *35*(12), 7640A. (University Microfilms No. 75-5437)

Scott, Foresman and Company. *Guidelines for improving the image of women in textbooks*. Glenview, Ill.: Author, 1972.

Sears, R. R. Relation of early socialization experiences to self-concepts and gender role in middle childhood. *Child Development*, 1970, *41*, 267-289.

Sherrill, C. See Dick run, see Jane sit. *Women's Studies Abstracts*, 1973, *2*(1), No. 002. (abstract)

Smith, P. A. K. An analysis of the treatment of males and females in basal reading textbooks. (Doctoral dissertation, West Virginia University, 1975). *Dissertation Abstracts International*, 1975, *36*(4), 1927A. (University Microfilms No. 75-21,932)

Stavn, D. G. The skirts in fiction about boys: A maxi mess. *School Library Journal*, 1971, *96*, 66-70.

Stefflre, B. Run, mama, run: Women workers in elementary readers. *Vocational Guidance Quarterly*, 1969, *18*, 99-102.

Stein, A. H., Pohly, S. R., & Mueller, E. The influence of masculine, feminine, and neutral tasks on children's achievement behavior, expectations of success, and attainment values. Child Development, 1971, 42, 195-207.

Stewig, J., & Higgs, M. Girls grow up to be mommies: A study of sexism in children's literature. School Library Journal, 1973, 98, 44-49.

Stewig, W., & Knipfel, M. L. Sexism in picture books: What progress? Elementary School Journal, 1975, 76, 151-155.

Stotsky, S. Intervention in sex-role socialization. Women's Studies Newsletter, 1976, 4(2), 6-7.

Styer, S. Kindergarteners respond to male roles. Language Arts, 1975, 52, 877-880.

Tate, J. M. Sexual bias in science fiction for children. Elementary English, 1973, 50, 1061-1064.

Thetford, M. L. The case for the career book in grades five to eight: A feminist view. Elementary English, 1973, 50, 1059-1060+.

Thetford, M. L. Vocational roles for women in junior fiction. (Doctoral dissertation, Rutgers--The State University of New Jersey, 1974). Dissertation Abstracts International, 1974, 35(6), 3311A. (University Microfilms No. 74-27,348)

Thompson, C., & Parker, J. Fifth graders view the work world scene. Elementary School Guidance and Counseling, 1971, 5, 281-288.

Thompson, G. B. Sex differences in reading attainments. Educational Research, 1975, 18, 16-23.

Tibbetts, S. L. Sex differences in children's reading preferences. Reading Teacher, 1974, 28, 279-281.

Topping, C. S. Sex-role preference of second, fourth, and sixth grade children as related to IQ, achievement, self-esteem, and peer reputation. (Doctoral dissertation, University of Colorado, 1975). Dissertation Abstracts International, 1976, 36(8), 5028A. (University Microfilms No. 76-3961)

Tregaskis, G. K. The relationship between sex role standards of reading and reading achievement of first-grade boys. (Doctoral dissertation, State University of New York at Albany, 1972). Dissertation Abstracts International, 1972, 33(6A), 2777A. (University Microfilms No. 72-31,824)

United States Bureau of the Census. Census of population: 1970. Characteristics of the population. United States summary. (Vol. 1, Pt. 1, Sec. 2). Washington, D.C.: U.S. Government Printing Office, 1973.

United States Bureau of the Census. Data User's Service Staff. 1970 Census of population and housing: Census tracts--Non-SMSA areas in New Jersey. Washington, D.C.: U.S. Government Printing Office, 1970.

U'ren, M. B. The image of women in textbooks. In V. Gornick & B. K. Morens (Eds.). Women in sexist society: Studies in power and powerlessness. New York: Basic Books, 1971.

Valotti, R., & Drabkoski, D. Sex stereotyping: Surveying its effect on students. Media and Methods, 1975, 12, 8+.

Weitzman, L. J., Eifler, D., Hokada, E., & Ross, C. Sex-role socialization in picture books for preschool children. American Journal of Sociology, 1972, 77, 1125-1150.

Weitzman, L. J., & Rizzo, D. Sex bias in textbooks. Today's

Education, 1975, 64, 49-52.

Wiik, S. L. The sexual bias of textbook literature. English Journal, 1973, 62, 224-229.

Women on Words and Images. Dick and Jane as victims: Sex stereotyping in children's readers (Rev. ed.). Princeton, N.J.: Author, 1975.

Woolever, R. M. Expanding elementary pupils' occupational and social role perceptions: An examination of teacher attitudes and behavior and pupil attitude change. (Doctoral dissertation, University of Washington, 1976). Dissertation Abstracts International, 1976, 37(3), 1394A. (University Microfilms No. 76-20,741)

Zimet, S. G. Reader content and sex differences in achievement. Reading Teacher, 1976, 29, 758-763.

APPENDIX A

INSTRUCTIONS

Instructions to Classes

Sample Test

Interest Scale

Instructions to Classes

Hello boys and girls. My name is Susan Metz. I am from Rutgers University, and I would like to find out something about what kinds of stories fifth graders like to read. I would also like to find out how well you understand what you read, by giving you a new kind of reading test. Is there anyone who doesn't have a pen or pencil?

First we will practice with the sample stories you have been given. Please read the story to yourself, and look up when you are finished. (Wait for pupils to read story.)

Below the story you see six sentences that tell how someone might feel about this story:

This is the type of story I LIKE to read VERY, VERY MUCH.

This is the type of story I LIKE to read VERY MUCH.

This is the type of story I LIKE to read SOMEWHAT.

This is the type of story I DO NOT LIKE to read SOMEWHAT.

This is the type of story I DO NOT LIKE to read VERY MUCH.

This is the type of story I DO NOT LIKE to read VERY, VERY MUCH.

Put a "check" in fromt of the sentence that best describes the way you feel about the type of story you have just read. Please check only one sentence. Do not be afraid to tell me if you did not like the story. That is what I want to find out. (Pause.)

Here is the test for this story. You can see that some of the words are missing, but you can still understand what the story is about. You can probably figure out what words to put in the blank spaces without looking back at the story. Who can tell me a word that makes sense in the first blank? (Wait for answer.) That's right, "of" is a word that makes sense in this sentence: "Mary argued that none of her friends had to work." Everyone please write the word "of" in the first blank space. (Pause.) Can someone tell me a word that makes sense in the second blank? (Wait for answer.) That's right: "But her father wouldn't change his mind." Now everyone write "her" in the second blank.

See if you can finish the sample test by yourselves. Do not look back at the story. If you do not remember the same word that was in the story, try to guess a word that makes sense. Try to fill in all the blanks in the test if you can. If you do not know how to spell a word, try your best and I will try hard to figure it out. Please write only one word in each blank. If you change your mind, you may cross out or erase the word you don't want. You may use either pen or pencil to take the test.

Finish the sample test now and then we will review it. Do not turn your papers back to the story. Please look up when you are finished. (Wait for students to complete test.) Now I will read the test out loud and ask you to tell me a word that makes sense in each blank.

Mary Anderson, Social Worker

When Mary Anderson was twelve, her father insisted she work one day a week in the Free Hospital. "Rich people must serve mankind," declared her father. Mary argued that none of her friends had to work, but her father wouldn't change his mind. The work grew very interesting. Soon, Mary gave all her spare time to the hospital. She made up her mind she would spend her life working with the poor.

You will each be given two booklets that look like this. (Hold up sample booklet.) Each booklet has a story on the back page and a test inside. When I tell you to begin, you will turn to the back page like this (demonstrate) and read the story. When you are finished, turn to the front page again like this (demonstrate) and read the sentences that tell how you feel about the story. After you check one sentence, you may then open the booklet and turn it upside down like this (demonstrate) to take the test.

While you are taking the test, do not look back at the story. If you do not know what word to write, try to guess a word that makes sense in that sentence. It may help you to read ahead a little further, or to go back to the last sentence. Don't spend too much time over a very hard answer. Keep working and you may think of a good word later. Try to fill in all the blank spaces in the test if you can. Write only one word in each blank. When you finish each test, it is a good idea to check your work and see if you want to try the hardest blanks again. (Distribute booklets.)

You have all been given two booklets, numbered "1" and "2." Is there anyone who does not have two booklets? On the covers of both booklets, please write your first and last names and your teacher's name. Check whether you are a boy or a girl. Be sure to do this on both booklets. (Pause.)

Please read booklet number "1" first. When you are finished with the whole booklet, follow the same steps with booklet number "2." The instructions are on the covers of both booklets to remind you of what to do. You may take as much time as you need for each booklet. When you are finished with both booklets, raise your hand and I will collect the booklets from you. Please be quiet when you are finished because there may be other students still working on their booklets. Are there any questions? You may begin now with booklet number "1."

Instructions to Write on Blackboard

1. Start with booklet number "1."
2. Turn to the back page and read the story.
3. Turn to the front page again. Check the one sentence that best describes the way you feel about the type of story you have just read.
4. Open the booklet, turn it upside down, and take the test. Do *not* look back at the story.
5. When you finish booklet number "1," follow the same steps with booklet number "2."
6. When you are finished with both booklets, raise your hand. Please be quiet when you are finished.

Sample Test

MARY ANDERSON, SOCIAL WORKER

When Mary Anderson was twelve, her father insisted she work one day a week in the Free Hospital. "Rich people must serve mankind," declared her father. Mary argued that none of her friends had to work, but her father wouldn't change his mind. The work grew very interesting. Soon, Mary geve all her spare time to the hospital. She made up her mind she would spend her life working with the poor.

Put a "check" in front of the sentence that best describes the way you feel about the type of story you have just read:

_____This is the type of story I LIKE to read VERY, VERY MUCH.

_____This is the type of story I LIKE to read VERY MUCH.

_____This is the type of story I LIKE to read SOMEWHAT.

_____This is the type of story I DO NOT LIKE to read SOMEWHAT.

_____This is the type of story I DO NOT LIKE to read VERY MUCH.

_____This is the type of story I DO NOT LIKE to read VERY, VERY MUCH.

Now, look at the back of this page and turn it upside-down to take the test. DO NOT look back at the story while you are taking the test.

Try to fill in all the blank spaces in the test. If you do not know what word to write, try to guess a word that makes sense.

MARY ANDERSON, SOCIAL WORKER

When Mary Anderson was twelve, her father insisted she work one day a week in the Free Hospital. "Rich people must serve mankind," declared her father. Mary argued that none ______________ her friends had to work, but ______________ father wouldn't change his mind. The ______________ grew very interesting. Soon, Mary gave ______________ her spare time to the hospital. ______________ made up her mind she would ______________ her life working with the poor.

N A M E________________________ ____BOY

____GIRL

T E A C H E R____________________

First, turn to the back page and read the story. When you are finished, turn back to this page and read the sentences below.

Put a "check" in front of the sentence that best describes the way you feel about the type of story you have just read:

____This is the type of story I LIKE to read VERY, VERY MUCH.

____This is the type of story I LIKE to read VERY MUCH.

____This is the type of story I LIKE to read SOMEWHAT.

____This is the type of story I DO NOT LIKE to read SOMEWHAT.

____This is the type of story I DO NOT LIKE to read VERY MUCH.

____This is the type of story I DO NOT LIKE to read VERY, VERY MUCH.

Now, open the book and turn it upside-down to take the test. DO NOT look back at the story while you are taking the test.

Try to fill in all the blank spaces in the test. If you do not know what word to write, try to guess a word that makes sense.

APPENDIX B

STORIES AND CLOZE TESTS

Rita Travers, Pilot

Roy Travers, Pilot

Debbie Sheldon, Pilot

Don Sheldon, Pilot

Ann Banks, Ballet Dancer

Arnold Banks, Ballet Dancer

Linda Petit, Ballet Dancer

Lawrence Petit, Ballet Dancer

RITA TRAVERS, PILOT

"I'm flying," screamed ten-year-old Rita Travers. She was riding a box on wheels over a hand-made roller coaster. Four friends built the dangerous device, but only Rita had the nerve to try it. She climbed to the top again and swooped down much faster than the first time. Rita crashed to the floor and was carried to the house.

One thing Rita thought about as much as flying was taking pictures. Her father decided an expensive camera might get Rita's mind off flying. The plan almost worked. Rita became a photographer, however she used her earnings to take flying lessons and buy a plane. She often took pictures from the air and won many prizes for her work. An airplane company offered Rita a job taking pictures of jets in flight and Rita accepted.

Cruising at 40,000 feet, Rita waits until a jet flies straight toward her before shooting her pictures. Every move has been plotted before take-off by the two pilots. Nevertheless, it is always possible for something to go wrong. Rita has a split second to aim the camera, focus, and click off pictures. Then there is no time for another picture. The two planes veer away from each other to avoid a mid-air crash. When Rita lands, the films are rushed to be developed. If the pictures are good, the engineers on the ground will have valuable information about the fighter's wings.

"You never get used to flying close to another plane and taking pictures. There are too many things that can go wrong either in your plane or the other fellow's," explained Rita. "Yet," she continued, "if airplanes are to get better, the people who build them need us in the air to take pictures."

One day, Rita was flying a new jet. Four cameras were attached to each wing. One was placed in the nose of the plane. By pressing a trigger, all cameras would take pictures at the same time.

A flight of jets was ahead. Suddenly, a voice cut through the engine roar, "Your right engine's on fire." Rita pressed the fire control button, but nothing happened. She climbed rapidly and then went into a dive to put out the fire, but it grew worse. "What are you doing?" shouted the voice from the radio.

Rita had no time to answer. She opened the hatch and aimed the plane toward open water; then jumped. As soon as she felt she was clear, she pulled the ripcord. Rita was falling head down when the chute risers whipped her upright and then the chute opened. It worked perfectly. She looked for the plane. Suddenly there was a bright flash and the plane disappeared into a thousand pieces.

RITA TRAVERS, PILOT

"I'm flying," screamed ten-year-old Rita Travers. She was riding a box on wheels over a hand-made roller coaster. Four friends built the dangerous device, but only Rita had the nerve to try it. She climbed to the top again and swooped down much faster than the first time. Rita _______________ to the floor and was carried _______________ the house.

One thing that Rita thought _______________ as much as flying was taking _______________. Her father decided that an expensive camera _______________ get Rita's mind off flying. The _______________ almost worked. Rita became a photographer, _______________ she used her earnings to take _______________ lessons and buy a plane. She _______________ took pictures from the air and _______________ many prizes for her work. An _______________ company offered Rita a job taking _______________ of jets in flight and Rita _______________.

Cruising at 40,000 feet, Rita waits _______________ a jet flies straight toward her _______________ shooting her pictures. Every move has _______________ plotted before take-off by the two _______________. Nevertheless, it is always possible for _______________ to go wrong. Rita has a _______________ second to aim the camera, focus, _______________ click off pictures. Then there is _______________ time for another picture. The two _______________ veer away from each other to _______________ a mid-air crash. When Rita lands, _______________ films are rushed to be developed. _______________ the pictures are good, the engineers ______________ the ground will have valuable information ______________ the fighter's wings.

"You never get ______________ to flying close to another plane ______________ taking pictures. There are too many things ______________ can go wrong either in your ______________ or the other fellow's," explained Rita. "______________," she continued, "if airplanes are to ______________ better, the people who build them ______________ us in the air to take ______________."

One day, Rita was flying a ______________ jet. Four cameras were attached to ______________ wing. One was placed in the ______________ of the plane. By pressing a ______________, all cameras would take pictures at ______________ same time.

A flight of jets ______________ ahead. Suddenly, a voice cut through ______________ engine roar, "Your right engine's on ______________." Rita pressed the fire control button, ______________ nothing happened. She climbed rapidly and ______________ went into a dive to put ______________ the fire, but it grew worse. "______________ are you doing?" shouted the voice ______________ the radio.

Rita had no time ______________ answer. She opened the hatch and ______________ the plane toward the open water; then jumped. As soon as she felt she was clear, she pulled the ripcord.

ROY TRAVERS, PILOT

"I'm flying," screamed ten-year-old Roy Travers. He was riding a box on wheels over a hand-made roller coaster. Four friends built the dangerous device, but only Roy had the nerve to try it. He climbed to the top again and swooped down much faster than the first time. Roy crashed to the floor and was carried to the house.

One thing Roy thought about as much as flying was taking pictures. His father decided an expensive camera might get Roy's mind off flying. The plan almost worked. Roy became a photographer, however he used his earnings to take flying lessons and buy a plane. He often took pictures from the air and won many prizes for his work. An airplane company offered Roy a job taking pictures of jets in flight and Roy accepted.

Cruising at 40,000 feet, Roy waits until a jet flies straight toward him before shooting his pictures. Every move has been plotted before take-off by the two pilots. Nevertheless, it is always possible for something to go wrong. Roy has a split second to aim the camera, focus, and click off pictures. Then there is no time for another picture. The two planes veer away from each other to avoid a mid-air crash. When Roy lands, the films are rushed to be developed. If the pictures are good, the engineers on the ground will have valuable information about the fighter's wings.

"You never get used to flying close to another plane and taking pictures. There are too many things that can go wrong either in your plane or the other fellow's," explained Roy. "Yet," he continued, "if airplanes are to get better, the people who build them need us in the air to take pictures."

One day, Roy was flying a new jet. Four cameras were attached to each wing. One was placed in the nose of the plane. By pressing a trigger, all cameras would take pictures at the same time.

A flight of jets was ahead. Suddenly, a voice cut through the engine roar, "Your right engine's on fire." Roy pressed the fire control button, but nothing happened. He climbed rapidly and then went into a dive to put out the fire, but it grew worse. "What are you doing?" shouted the voice from the radio.

Roy had no time to answer. He opened the hatch and aimed the plane toward open water; then jumped. As soon as he felt he was clear, he pulled the ripcord. Roy was falling head down when the chute risers whipped him upright and then the chute opened. It worked perfectly. He looked for the plane. Suddenly there was a bright flash and the plane disappeared into a thousand pieces.

ROY TRAVERS, PILOT

"I'm flying," screamed ten-year-old Roy Travers. He was riding a box on wheels over a hand-made roller coaster. Four friends built the dangerous device, but only Roy had the nerve to try it. He climbed to the top again and swooped down much faster than the first time. Roy _______________ to the floor and was carried _______________ the house.

One thing that Roy thought _______________ as much as flying was taking _______________. His father decided an expensive camera _______________ get Roy's mind off flying. The _______________ almost worked. Roy became a photographer, _______________ he used his earnings to take _______________ lessons and buy a plane. He _______________ took pictures from the air and _______________ many prizes for his work. An _______________ company offered Roy a job taking _______________ of jets in flight and Roy _______________.

Cruising at 40,000 feet, Roy waits _______________ a jet flies straight toward him _______________ shooting his pictures. Every move has _______________ plotted before take-off by the two __________. Nevertheless, it is always possible for _______________ to go wrong. Roy has a _______________ second to aim the camera, focus, ___________ click off pictures. Then there is _______________ time for another picture. The two _______________ veer away from each other to _______________ a mid-air crash. When Roy lands, _______________ films are rushed to be developed. _______________ the pictures are good, the engineers _______________ the ground will have valuable information _______________ fighter's wings.

"You never get _______________ to flying close to another plane _______________ taking pictures. There are too many things __________ can go wrong either in your _______________ or the other fellow's," explained Roy. "_______________," he continued, "if airplanes are to _______________ better, the people who build them _______________ us in the air to take _______________."

One day, Roy was flying a _______________ jet. Four cameras were attached to _______________ wing. One was placed in the _____________ of the plane. By pressing a _______________, all cameras would take pictures at _______________ same time.

A flight of jets _______________ ahead. Suddenly, a voice cut through _______________ engine roar, "Your right engine's on _________." Roy pressed the fire control button, _______________ nothing happened. He climbed rapidly and _______________ went into a dive to put _______________ the fire, but it grew worse. "_______________ are you doing?" shouted the voice _______________ the radio.

Roy had no time _______________ answer. He opened the hatch and _______________ the plane toward the open water; then jumped. As soon as he felt he was clear, he pulled the ripcord.

DEBBIE SHELDON, PILOT

Debbie Sheldon is Alaska's most famous bush pilot. In the roadless wilderness that is the center of Alaska, Debbie's plane is a taxi, the railroad, and often an ambulance. Trappers, miners, and homesteaders depend on Debbie for supplies and to get in and out of the country.

"There isn't a better pilot in the world," say all of Debbie's friends. She can take off from a cow pasture with a full load of eggs or dynamite. An hour later she will air-drop a case of eggs or the dynamite within fifty feet of a marked spot. Not an egg is ever broken, and, needless to say, nobody has been blown up. "I'll bet," a pilot said, "Debbie could land her plane on the back of a whale floating on the surface."

Debbie works a long day. It begins very early. On the first trip she usually takes a passenger or two ninety bumpy miles down river to Anchorage. There she finds a load of cargo which she puts on the plane.

She flies back north with the cargo for a construction camp seventy-five miles from the city. She lands the plane and it is unloaded. Quickly she takes off to deliver gasoline and pick up a sick man to bring to Anchorage's hospital. She buys a supply of chewing tobacco for a miner which she drops on the way back home.

To know Debbie, you must fly with her. I went on a flight one day to pick up some mountain climbers atop Mount McKinley, North America's highest peak. McKinley is nearly four miles high. People come from all over the world to climb it and Debbie flies most of them to and from the slopes.

For this flight, Debbie uses a small airplane with skiis to land in the snow. We take off and a minute later Debbie throws the plane into a stomach-upsetting sharp bank. Suddenly, Debbie points to a silver glitter and explains, "Plane fell apart in mid-air and crashed there a few years back, killing everyone. This little plane will stand up to anything nature offers, but there are problems. I may fall asleep. The engines may fail and you've no place to land. You aim between the two tallest trees around and let the plane try to keep together by itself. First the wings tear off, then the landing gear, and before anything happens to the fuselage, you stop--you hope. Then you begin to pray you're found before you freeze to death." Suddenly the plane was in a whiteout. It was like flying in a bottle of milk. Quickly the air cleared and Debbie looked troubled. The mountain could be in a bad mood.

DEBBIE SHELDON, PILOT

Debbie Sheldon is Alaska's most famous bush pilot. In the roadless wilderness that is the center of Alaska, Debbie's plane is a taxi, the railroad, and often an ambulance. Trappers, miners, and homesteaders depend on Debbie for supplies and to get in and out of the country.

"There _______________ a better pilot in the world," _______________ all of Debbie's friends. She can _______________ off from a cow pasture with a _______________ load of eggs or dynamite. An _______________ later she will air-drop a case _______________ eggs or the dynamite within fifty _______________ of a marked spot. Not an _______________ is ever broken, and, needless to _______________, nobody has been blown up. "I'll bet," _______________ pilot said, "Debbie could land her _______________ on the back of a whale _______________ on the surface."

Debbie works a _______________ day. It begins very early. On _______________ first trip she usually takes a _______________ or two ninety bumpy miles down _______________ to Anchorage. There she finds a _______________ of cargo which she puts on _______________ plane.

She flies back north with _______________ cargo for a construction camp seventy-five _______________ from the city. She lands the _______________ and it is unloaded. Quickly she takes _______________ to deliver gasoline and pick up _______________ sick man to bring to Anchorage's _______________. She buys a supply of chewing _______________ for a miner which she drops _______________ the way back home.

To know _______________, you must fly with her. I _______________ on a flight one day to _______________ up some mountain climbers atop Mount _______________, North America's highest peak. McKinley is _______________ four miles high. People come from _______________ over the world to climb it _______________ Debbie flies most of them to _______________ from the slopes.

For this flight, _______________ uses a small airplane with skiis _______________ land in the snow. We take off _______________ a minute later Debbie throws the _______________ into a stomach-upsetting sharp bank. _______________, Debbie points to a silver glitter _______________ explains, "Plane fell apart in mid-air _______________ crashed there a few years back, _______________ everyone. This little plane will stand _______________ to anything nature offers, but there _______________ problems. I may fall asleep. The _______________ may fail and you've no place _______________ land. You aim between the two _______________ trees around and let the plane _______________ to keep together by itself. First _______________ wings tear off, then the landing _______________, and before anything happens to the fuselage, you stop--you hope. Then you begin to pray you're found before you freeze to death."

DON SHELDON, PILOT

Don Sheldon is Alaska's most famous bush pilot. In the roadless wilderness that is the center of Alaska, Don's plane is a taxi, the railroad, and often an ambulance. Trappers, miners, and homesteaders depend on Don for supplies and to get in and out of the country.

"There isn't a better pilot in the world," say all of Don's friends. He can take off from a cow pasture with a full load of eggs or dynamite. An hour later he will air-drop a case of eggs or the dynamite within fifty feet of a marked spot. Not an egg is ever broken, and, needless to say, nobody has been blown up. "I'll bet," a pilot said, "Don could land his plane on the back of a whale floating on the surface."

Don works a long day. It begins very early. On the first trip he usually takes a passenger or two ninety bumpy miles down river to Anchorage. There he finds a load of cargo which he puts on the plane.

He flies back north with the cargo for a construction camp seventy-five miles from the city. He lands the plane and it is unloaded. Quickly he takes off to deliver gasoline and pick up a sick man to bring to Anchorage's hospital. He buys a supply of chewing tobacco for a miner which he drops on the way back home.

To know Don, you must fly with him. I went on a flight one day to pick up some mountain climbers atop Mount McKinley, North America's highest peak. McKinley is nearly four miles high. People come from all over the world to climb it and Don flies most of them to and from the slopes.

For this flight, Don uses a small airplane with skiis to land in the snow. We take off and a minute later Don throws the plane into a stomach-upsetting sharp bank. Suddenly, Don points to a silver glitter and explains, "Plane fell apart in mid-air and crashed there a few years back, killing everyone. This little plane will stand up to anything nature offers, but there are problems. I may fall asleep. The engine may fail and you've got no place to land. You aim between the two tallest trees around and let the plane try to keep together by itself. First the wings tear off, then the landing gear, and before anything happens to the fuselage, you stop--you hope. Then you begin to pray you're found before you freeze to death."

Suddenly the plane was in a whiteout. It was like flying in a bottle of milk. Quickly the air cleared and Don looked troubled. The mountain could be in a bad mood.

DON SHELDON, PILOT

Don Sheldon is Alaska's most famous bush pilot. In the roadless wilderness that is the center of Alaska, Don's plane is a taxi, the railroad, and often an ambulance. Trappers, miners, and homesteaders depend on Don for supplies and to get in and out of the country.

"There _______________ a better pilot in the world," _______________ all of Don's friends. He can _______________ off from a cow pasture with a _______________ load of eggs or dynamite. An _______________ later he will air-drop a case _______________ eggs or the dynamite within fifty _______________ of a marked spot. Not an _______________ is ever broken, and, needless to _______________, nobody has been blown up. "I'll bet," _______________ pilot said, "Don could land his _______________ on the back of a whale _______________ on the surface."

Don works a _______________ day. It begins very early. On _______________ first trip he usually takes a _______________ or two ninety bumpy miles down _______________ to Anchorage. There he finds a _______________ of cargo which he puts on _______________ plane. He flies back north with _______________ cargo for a construction camp seventy-five _______________ from the city. He lands the _______________ and it is unloaded. Quickly he takes _______________ to deliver gasoline and pick up _______________ sick man to bring to Anchorage's _______________. He buys a supply of chewing _______________ for a miner which he drops _______________ the way home.

To know _______________, you must fly with him. I _______________ on a flight one day to _______________ up some mountain climbers atop Mount _______ _______, North America's highest peak. McKinley is _______________ four miles high. People come from _______________ over the world to climb it _______________ Don flies most of them to _______________ from the slopes.

For this flight, _______________ uses a small airplane with skiis _______________ land in the snow. We take off _______________ a minute later Don throws the _______________ into a stomach-upsetting sharp bank. _______________, Don points to a silver glitter _______________ explains, "Plane fell apart in mid-air _______________ crashed there a few years back, _______________ everyone. This little plane will stand _______________ to anything nature offers, but there _______________ problems. I may fall asleep. The _______________ may fail and you've no place _______________ land. You aim between the two _______________ trees around and let the plane _______________ to keep together by itself. First _______________ wings tear off, then the landing _______________, and before anything happens to the fuselage, you stop--you hope. Then you begin to pray you're found before you freeze to death."

ANN BANKS, BALLET DANCER

Ann Banks' father was a famous playwright. Ann had no other plans for her life than to act in her father's plays. However, she changed her mind when she saw her first ballet. "I want to take ballet lessons," she told her mother. Her mother refused to arrange lessons. She explained that rigid ballet training made machines of people.

Ann decided, "If I cannot take ballet, I will read everything I can find about ballet." She collected pictures of famous dancers. She danced to records, making up steps of her own. When she read that a certain dancer advised running over hills barefoot, she tried it, but ended up with cut feet from broken glass.

Ann's lessons came in an unexpected way. Her sister Sally was suffering from fallen arches. To strengthen her feet, the doctor advised Mrs. Banks, "Sally should take ballet." Mr. Banks argued with his wife that if Sally took ballet, they might as well let Ann take lessons too.

Both Ann and Sally were taken to Popov's Dance School. Popov looked at Ann and said, "You are too heavy. You have weak knees and stand very poorly. You are a little old to start ballet." Nevertheless, Popov accepted Ann in his school.

Books did not prepare Ann for the hard work ahead. She was completely surprised by aches and pains and how tired she would always feel. The mirror showed her that her legs were too short. "You'll never be a dancer," insisted Popov.

Ann attended ballets often. She studied what she wanted to do in her own dancing. "I will be a dancer," Ann promised herself. To prove Popov wrong, she practiced harder and longer which worried her parents and they sent her to England.

She decided to stay in London where she created a ballet for herself called "Rodeo." "Rodeo" is a love story set in the American Southwest. It centers around a cowgirl. With the odds against her she fights for her love and the ranch her father left her. She seems to be failing, but in the end wins both. In the ballet, there is a great deal of riding, roping, and square dancing.

When the ballet opened in New York City, everything seemed to go wrong. Steps were missed. Some of the girls clapped offbeat. As the curtain closed, Ann began sneezing from the dust. "How many mistakes can happen in one evening?" she wondered.

The audience didn't seem to notice what went wrong. They enjoyed the ballet and their applause resulted in twenty-two curtain calls. However, not all the newspaper writers were as pleased, and Ann still had to prove to them that she was a dancer.

ANN BANKS, BALLET DANCER

Ann Banks' father was a famous playwright. Ann had no other plans for her life than to act in her father's plays. However, she changed her mind when she saw her first ballet. "I want to take ballet lessons," she told her mother. Her _______________ refused to arrange lessons. She explained _______________ rigid ballet training made machines of _______________.

Ann decided, "If I cannot take _______________, I will read everything I can _______________ about ballet." She collected pictures of _______________ dancers. She danced to records, making _______________ steps of her own. When she _______________ that a certain dancer advised running _______________ hills barefoot, she tried it, but ended up with cut feet from broken _______________.

Ann's lessons came in an unexpected _______________. Her sister Sally was suffering from _______________ arches. To strengthen her feet, the _______________ advised Mrs. Banks, "Sally should take ___ ___________." Mr. Banks argued with his wife _______________ if Sally took ballet, they might _______________ well let Ann take lessons too.

_______________ Ann and Sally were taken to _______________ Dance School. Popov looked at Ann _______________ said, "You are too heavy. You _______________ weak knees and stand very poorly. _______________ are a little old to start _______________." Nevertheless, Popov accepted Ann in his _______________.

Books did not prepare Ann for _______________ hard work ahead. She was completely _______________ by aches and pains and how _________ she would always feel. The mirror _______________ her that her legs were too _______________. "You'll never be a dancer," insisted _______________.

Ann attended ballets often. She studied _______________ she wanted to do in her _______________ dancing. "I will be a dancer," _______________ promised herself. To prove Popov wrong, _____________ practiced harder and longer which worried _______________ parents and they sent her to _______________.

She decided to stay in London _______________ she created a ballet for herself _______________ "Rodeo." "Rodeo" is a love story _______________ in the American Southwest. It centers _______________ a cowgirl. With the odds against _______________ she fights for her love and _______________ ranch her father left her. She _______________ to be failing, but in the _______________ wins both. In the ballet, there _______________ a great deal of riding, roping, _______________ square dancing.

When the ballet opened _______________ New York City, everything seemed to _______________ wrong. Steps were missed. Some of _______________ girls clapped off beat. As the curtain _______________, Ann began sneezing from the dust. "How many mistakes can happen in one evening?" she wondered.

ARNOLD BANKS, BALLET DANCER

Arnold Banks' father was a famous playwright. Arnold had no other plans for his life than to act in his father's plays. However, he changed his mind when he saw his first ballet. "I want to take ballet lessons," he told his mother. His mother refused to arrange lessons. She explained that rigid ballet training made machines of people.

Arnold decided, "If I cannot take ballet, I will read everything I can find about ballet." He collected pictures of famous dancers. He danced to records, making up steps of his own. When he read that a certain dancer advised running over hills barefoot, he tried it, but ended up with cut feet from broken glass.

Arnold's lessons came in an unexpected way. His brother Sam was suffering from fallen arches. To strengthen his feet, the doctor advised Mrs. Banks, "Sam should take ballet." Mr. Banks argued with his wife that if Sam took ballet, they might as well let Arnold take lessons too.

Both Arnold and Sam were taken to Popov's Dance School. Popov looked at Arnold and said, "You are too heavy. You have weak knees and stand very poorly. You are a little old to start ballet." Nevertheless, Popov accepted Arnold in his school.

Books did not prepare Arnold for the hard work ahead. He was completely surprised by aches and pains and how tired he would always feel. The mirror showed him that his legs were too short. "You'll never be a dancer," insisted Popov.

Arnold attended ballets often. He studied what he wanted to do in his own dancing. "I will be a dancer," Arnold promised himself. To prove Popov wrong, he practiced harder and longer which worried his parents and they sent him to England.

He decided to stay in London where he created a ballet for himself called "Rodeo." "Rodeo" is a love story set in the American Southwest. It centers around a cowboy. With the odds against him he fights for his love and the ranch his father left him. He seems to be failing, but in the end wins both. In the ballet, there is a great deal of riding, roping, and square dancing.

When the ballet opened in New York City, everything seemed to go wrong. Steps were missed. Some of the girls clapped offbeat. As the curtain closed, Arnold bagan sneezing from the dust. "How many mistakes can happen in one evening?" he wondered.

The audience didn't seem to notice what went wrong. They enjoyed the ballet and their applause resulted in twenty-two curtain calls. However, not all the newspaper writers were as pleased, and Arnold still had to prove to them that he was a dancer.

ARNOLD BANKS, BALLET DANCER

Arnold Banks' father was a famous playwright. Arnold had no other plans for his life than to act in his father's plays. However, he changed his mind when he saw his first ballet. "I want to take ballet lessons," he told his mother. His _______________ refused to arrange lessons. She explained _______________ rigid ballet training made machines of _______________.

Arnold decided, "If I cannot take _______________, I will read everything I can _______________ about ballet." He collected pictures of _______________ dancers. He danced to records, making _______________ steps of his own. When he _______________ that a certain dancer advised running _______________ hills barefoot, he tried it, but ended up with cut feet from broken _______________.

Arnold's lessons came in an unexpected _______________. His brother Sam was suffering from _______________ arches. To strengthen his feet, the _______________ advised Mrs. Banks, "Sam should take _______________." Mr. Banks argued with his wife _______________ if Sam took ballet, they might _______________ well let Arnold take lessons too.

_______________ Arnold and Sam were taken to _______________ Dance School. Popov looked at Arnold _______________ said, "You are too heavy. You _______________ weak knees and stand very poorly. _______________ are a little old to start _______________." Nevertheless, Popov accepted Arnold in his _______________.

Books did not prepare Arnold for ______________ hard work ahead. He was completely ______________ by aches and pains and how ______________ he would always feel. The mirror ______________ him that his legs were too ______________. "You'll never be a dancer," insisted ______________.

Arnold attended ballets often. He studied ______________ he wanted to do in his ______________ dancing. "I will be a dancer," ______________ promised himself. To prove Popov wrong, ______________ practiced harder and longer which worried ______________ parents and they sent him to ______________.

He decided to stay in London ______________ he created a ballet for himself ______________ "Rodeo." "Rodeo" is a love story ______________ in the American Southwest. It centers ______________ a cowboy. With the odds against ______________ he fights for his love and ______________ ranch his father left him. He ______________ to be failing, but in the ______________ wins both. In the ballet, there ______________ a great deal of riding, roping, ______________ square dancing.

When the ballet opened ______________ New York City, everything seemed to ______________ wrong. Steps were missed. Some of ______________ girls clapped offbeat. As the curtain ______________, Arnold began sneezing from the dust. "How many mistakes can happen in one evening?" he wondered.

LINDA PETIT, BALLET DANCER

The "Chez Petit" was a small restaurant in the middle of Paris. It was famous for two things--its onion soup and a small girl named Linda Petit who wore a pair of ballet slippers several sizes too big for her. Each evening she danced and clowned around the restaurant. People enjoyed watching Linda and threw coins for her to gather.

Linda had been surrounded by dancing and talk of dancing from the time she was born. Her father had been a ballet dancer and her mother was a modern dancer.

From the day Linda's mother brought home a pair of ballet slippers, her feet were never still. She made up new dances every day and tried them out every night at the restaurant. Her father was afraid at first that patrons would be annoyed. He soon found out that Linda's dancing was actually bringing in new customers.

When Linda was seventeen, she surprised her family by announcing that she was going to become a doctor. Meanwhile, she landed a summer job as a chorus girl in a Paris night club. By the time school started in the fall, Linda made up her mind to become a dancer.

The kind of dancing she wanted was ballet. She picked one of the best teachers and continued to work to pay for her lessons. After several months of study she began to dance with the "Young Ballet."

Linda was very busy. In the mornings she took lessons. In the afternoon she rehearsed for her job and also with the Young Ballet Group. Finally, in the evening she gave her performance. Some nights she danced twice; once, in the ballet theater, and then at the night club.

When she was eighteen, Linda joined the Lyon Ballet. She was given her first solo, that of a deer. In the morning of the opening, someone discovered that no one had made a costume for the deer. All that day, Linda rehearsed while being fitted. The last stitch was sewn just before she went on stage to dance. "As soon as I got out on the stage, I felt I could dance all night," she said, "but, up to that moment, I had one wish--that I were in medical school."

At nineteen, Linda joined a touring company going to the United States. In New York City, reviewers called her dancing "unforgettable." She was homesick, and though her salary was doubled, she returned to Paris.

In Paris, she and twelve young people rented a theater to perform their own ballets. People jammed the theater, but the group needed more money to continue.

LINDA PETIT, BALLET DANCER

The "Chez Petit" was a small restaurant in the middle of Paris. It was famous for two things--its onion soup and a small girl named Linda Petit who wore a pair of ballet slippers several sizes too big for her. Each _______________ she danced and clowned around the _______________. People enjoyed watching Linda and threw _______________ for her to gather.

Linda had _______________ surrounded by dancing and talk of _______________ from the time she was born. _______________ father had been a ballet dancer _______________ her mother was a modern dancer.

_______________ the day Linda's mother brought home _______________ pair of ballet slippers, her feet _______________ never still. She made up new _______________ every day and tried them out _______________ night at the restaurant. Her father _______________ afraid at first that patrons would _______________ annoyed. He soon found out that _______________ dancing was actually bringing in new _______________.

When Linda was seventeen, she surprised _______________ family by announcing that she was _______________ to become a doctor. Meanwhile, she _______________ a summer job as a chorus _______________ in a Paris night club. By _______________ time school started in the fall, _______________ made up her mind to become _______________ dancer.

The kind of dancing she _______________ was ballet. She picked one of _______________ best teachers and continued to work _______________ pay for her lessons. After several _______________ of study she began to dance _______________ the "Young Ballet."

Linda was very _______________. In the mornings she took lessons. _______________ the afternoons she rehearsed for her _______________ and also with the Young Ballet _______________. Finally, in the evening she gave _______________ performance. Some nights she danced twice; _______________, in the ballet theater, and then _______________ the night club.

When she was _______________, Linda joined the Lyon Ballet. She _______________ given her first solo, that of _______________ deer. In the morning of the _______________, someone discovered that no one had _______________ a costume for the deer. All _______________ day, Linda rehearsed while being fitted. _______________ last stitch was sewn just before _______________ went on stage to dance. "As _______________ as I got out on the _______________, I felt I could dance all _______________," she said, "but, up to that _______________, I had one wish--that I _______________ in medical school."

At nineteen, Linda _______________ a touring company going to the _______________ States. In New York City, reviewers called her dancing "unforgettable."

LAWRENCE PETIT, BALLET DANCER

The "Chez Petit" was a small restaurant in the middle of Paris. It was famous for two things--its onion soup and a small boy named Lawrence Petit who wore a pair of ballet slippers several sizes too big for him. Each evening he danced and clowned around the restaurant. People enjoyed watching Lawrence and threw coins for him to gather.

Lawrence had been surrounded by dancing and talk of dancing from the time he was born. His father had been a ballet dancer and his mother was a modern dancer.

From the day Lawrence's mother brought home a pair of ballet slippers, his feet were never still. He made up new dances every day and tried them out every night at the restaurant. His father was afraid at first that patrons would be annoyed. He soon found out that Lawrence's dancing was actually bringing in new customers.

When Lawrence was seventeen, he surprised his family by announcing that he was going to become a doctor. Meanwhile, he landed a summer job as a chorus boy in a Paris night club. By the time school started in the fall, Lawrence made up his mind to become a dancer.

The kind of dancing he wanted was ballet. He picked one of the best teachers and continued to work to pay for his lessons. After several months of study he began to dance with the "Young Ballet."

Lawrence was very busy. In the mornings he took lessons. In the afternoon he rehearsed for his job and also with the Young Ballet Group. Finally, in the evening he gave his performance. Some nights he danced twice; once, in the ballet theater, and then at the night club.

When he was eighteen, Lawrence joined the Lyon Ballet. He was given his first solo, that of a deer. In the morning of the opening, someone discovered that no one had made a costume for the deer. All that day, Lawrence rehearsed while being fitted. The last stitch was sewn just before he went on stage to dance. "As soon as I got out on the stage, I felt I could dance all night," he said, "but, up to that moment, I had one wish--that I were in medical school."

At nineteen, Lawrence joined a touring company going to the United States. In New York City, reviewers called his dancing "unforgettable." He was homesick, and though his salary was doubled, he returned to Paris.

In Paris he and twelve young people rented a theater to perform their own ballets. People jammed the theater, but the group needed more money to continue.

LAWRENCE PETIT, BALLET DANCER

The "Chez Petit" was a small restaurant in the middle of Paris. It was famous for two things--its onion soup and a small boy named Lawrence Petit who wore a pair of ballet slippers several sizes too big for him. Each _______________ he danced and clowned around the _______________. People enjoyed watching Lawrence and threw _______________ for him to gather.

Lawrence had _______________ surrounded by dancing and talk of _______________ from the time he was born. _______________ father had been a ballet dancer _______________ his mother was a modern dancer.

_______________ the day Lawrence's mother brought home __________ pair of ballet slippers, his feet _______________ never still. He made up new _______________ every day and tried them out _____________ night at the restaurant. His father _______________ afraid at first that patrons would _______________ annoyed. He soon found out that _______________ dancing was actually bringing in new _______________.

When Lawrence was seventeen, he surprised _______________ family by announcing that he was _______________ to become a doctor. Meanwhile, he _______________ a summer job as a chorus _______________ in a Paris night club. By _______________ time school started in the fall, _______________ made up his mind to become _______________ dancer.

LAWRENCE PETIT, BALLET DANCER

The "Chez Petit" was a small restaurant in the middle of Paris. It was famous for two things--its onion soup and a small boy named Lawrence Petit who wore a pair of ballet slippers several sizes too big for him. Each _______________ he danced and clowned around the _______________. People enjoyed watching Lawrence and threw _______________ for him to gather.

Lawrence had _______________ surrounded by dancing and talk of _______________ from the time he was born. _______________ father had been a ballet dancer _______________ his mother was a modern dancer.

_______________ the day Lawrence's mother brought home _______________ pair of ballet slippers, his feet _______________ never still. He made up new _______________ every day and tried them out _______________ night at the restaurant. His father _______________ afraid at first that patrons would _______________ annoyed. He soon found out that _______________ dancing was actually bringing in new _______________.

When Lawrence was seventeen, he surprised _______________ family by announcing that he was _______________ to become a doctor. Meanwhile, he _______________ a summer job as a chorus _______________ in a Paris night club. By _______________ time school started in the fall, _______________ made up his mind to become _______________ dancer.

The kind of dancing he _______________ was ballet. He picked one of _______________ best teachers and continued to work _______________ pay for his lessons. After several _______________ of study he began to dance _______________ the "Young Ballet."

Lawrence was very _______________. In the mornings he took lessons. _______________ the afternoon he rehearsed for his _______________ and also with the Young Ballet _______________. Finally, in the evening he gave _______________ performance. Some nights he danced twice; _______________, in the ballet theater, and then _______________ the night club.

When he was _______________, Lawrence joined the Lyon Ballet. He _______________ given his first solo, that of _______________ deer. In the morning of the _______________, someone discovered that no one had _______________ a costume for the deer. All _______________ day, Lawrence rehearsed while being fitted. _______________ last stitch was sewn just before _______________ went on stage to dance. "As _______________ as I got out on the _______________, I felt I could dance all _______________," he said, "but, up to that _______________, I had one wish--that I _______________ in medical school."

At nineteen, Lawrence _______________ a touring company going to the _______________ States. In New York City, reviewers called his dancing "unforgettable."